ENERGISE Maryland Act Prsentation.pdf
Uploaded by: bill temmink
Position: FAV

ENERGIZE Maryland Presentation

SB 0434 HB 0505

Mr. Chairmen, Members of the Committee, thank you for this opportunity to speak.

I am Bill Temmink. I live at 425 Latimer Road in Joppa Maryland 21085

My phone number is 410 679-1524

I have been closely following advances in nuclear energy technology for about six years now, but claim no specific expertise. I have simply been looking for the best strategy to halt, then reverse, climate change.

This is the right bill and this is the right time for it. Period.

It will help us create the clean energy we need to meet, then surpass our 2035 goal of 100% clean electricity. We should then be able to use this experience to decarbonize the remainder of our economy.

We should all know that we will have some hard work to do to make it work to reach our clean energy goals. Right now, the general public broadly supports nuclear energy. However, but, a combination of not-in-my-backyardism and misguided nuclear opposition will make getting this done harder than it needs to be. We need to be prepared to educate the general public as we move forward.

That said, I have faith that non-fossil fuel aligned folks will come around if we give them the facts. Sadly, we cannot wait for them to lead us. It is up to us to lead them.

Both unfortunately and fortunately we have the opportunity to do so now. This bill goes a long way to resolving one and should be helpful in solving the other.

We have two crises. We have a grid crisis and we have a longer term climate crisis. As Winston Churchill said, "Never let a good crisis go to waste."

The grid crisis is beginning to hit people in the wallets right now. Further climate change will continue to drive inflation upward. The Abundant Affordable Clean Energy Act will help with, but not likely be a long-range solution to that. It does provide necessary back-up energy, and quickly.

The bottom line for this is that batteries have a short discharge period, maybe four hours or so. We need steady, reliable energy for cold, windless days. So, batteries will help. They

just are not a permanent solution. So, already steps are being taken to solve the short-term grid problem. Pass that AACE bill and claim that victory.

The ENERGIZE Maryland Act is far and away the best proposal for solving the long-range problem. 3000MWe of clean nuclear energy will absolutely solve the grid problem. The trick is to start planning and building for it now. The bigger trick is to convince people it is a crisis. We'll need a plan to get the news media to cover salt-water intrusion on Bay shore crops and towns as well as urban and industrial flooding on both sides of the Bay.

Once people see the crisis, they will begin to look for answers. Then, we can have the conversations we need with them about nuclear energy. One odd point to add to this. The typical small modular reactor will be approximately the same size as the 1MWe batteries proposed by the AACE bill. This will give us the opportunity to put them in lots of places and to show people that the new reactors are not the eyesore they are envisioning.

So, when we create a Clean Energy Department, we need some folks in it that can do a few things. 1. Explain new nuclear energy technologies to folks; pick the best ones for Maryland; and 3. help businesses cut deals to bring nuclear energy technology here.

Everything else in my package is just information we should be able to use on how to move this forward.

I have three basic points to make.

A. **We should do this.** We have problems with both grid stability and clean energy production we need to address. Nuclear is far and away the best option.
B. **We should do this right**. We need a small staff to help us evaluate our nuclear energy options. We also need that staff to help us answer questions about nuclear energy to a largely misinformed public.
C. **There is likely an easier way to do this** than we have been considering. This bill would allow that way forward.

A We have grid and clean energy production problems. You all already know this. The Abundant Affordable Clean Energy Act will take initial steps to solve this. It is not likely a perfect solution as 1MW size batteries usually run at full power for about 4 hours. Thus, if we have a two or three day renewable energy drought, we'll need a lot more batteries than initially proposed. But, it is still a good step in the right direction. Adding nuclear energy to the clean energy portfolio is another good step.

What it neither does is provide sufficient, Affordable Clean Energy. This bill could make that final leap. It could do so by targeting the most reliable clean energy technologies.

B. There are a lot of nuclear energy options. We'll need a small staff of, probably three to five to pull all of the options together for legislative an executive review. We'll need expertise in nuclear energy technology. We'll need someone who can broker deals with nuclear energy companies, and most likely, between the State, the nuclear energy companies and A-I and data center companies. We'll need an outreach officer to explain all of this to general public. We'll need a skilled office/communications technology person.

C. Given that Maryland is committed to clean energy, it is unlikely we can get long-term investment in natural gas. What business will want to invest in something that likely will be phased out within the decade?

D. If we get started soon, there will be a lot of options. Otherwise, we'll likely have to wait in line behind more aggressive bidders. But, getting to the head of the line is doable. It is likely more easily done than people realize.

A Why nuclear? We Need to be Able to Answer this.

The short answer here is that it is reliable, greenhouse gas emissions free, safe, and uses far less resources than other energy options, including renewables.

https://www.nei.org/CorporateSite/media/filefolder/resources/fact-sheets/state-fact-sheets/Maryland-State-Fact-Sheet.pdf

But, what is holding everyone up is some fear of the technology itself and some fear of costs. We will need to address the fear questions up-front. Thus, we'll need our own in-house experts.

General overview of potential nuclear energy resources

1. Nuclear is safest energy source.

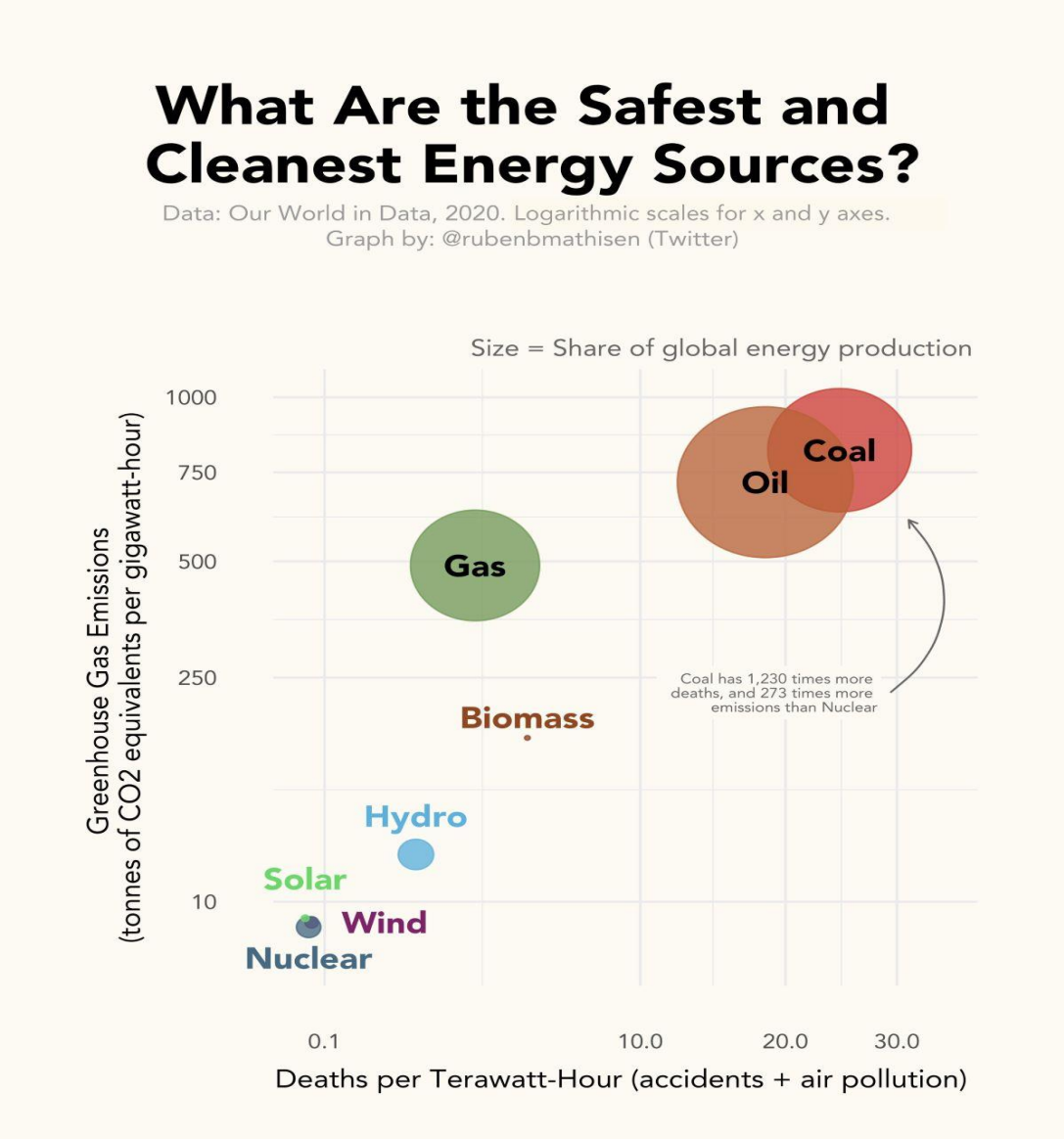
2. That includes the accidents at Chernobyl, ThreeMile Island and Fukushima.

   A. The Chernoble disaster was in 1986. Approximately 43 people died as a result of that disaster. The disaster caused by primarily by human error. https://world-nuclear.org/information-library/safety-and-security/safety-of-plants/chernobyl-accident#:~:text=The%20Chernobyl%20accident%20in%201986,result%20of%20acute%20radiation%20syndrome.

   B. No one was sickened from the Three Mile Island meltdown in 1979. They are trying to re-open the second reactor now. They could only do this if the radiation from the melt-down had already been contained. Three Mile Island accident | 1979, Pennsylvania, US | Britannica

   C. in 2011 Fukushima was a major disaster, but the main damage was not done by the damage to the reactor. It is now estimated that four workers eventually died from radiation-related exposure. Another 15,000+ died as the result of the tsunami and related evacuations from the tsunami-prone area. There simply should not have been a large community built in that area. That said, had the reactor been built to specifications, there would not have been a meltdown despite the tsunami.

Japan confirms first Fukushima worker death from radiation



Nuclear Waste is already safely stored.

There have been no documented cases of illness or death related to nuclear waste.

[Who's Afraid of Nuclear Waste?]

Further, We can now reuse nuclear waste and gain approximately 20 times the energy from the waste than we were able to obtain using older nuclear technologies. Literally, 95% of the nuclear energy in the original fuel is still available for use.

There is enough of this safely stored nuclear waste to power the U.S. for at least two centuries. Maryland, alone has enough to power our grid for about 400 years.

https://www.bing.com/images/search?view=detailV2&ccid=5YPy338%2B&id=00268728199BCF5674D8A60C6187D623C1734401&thid=OIP.5YPy338-NCPcxZ64DEciIAHaFf&mediaurl=http

The U.S. is not the leader in this technology, but is moving rapidly to be one of the leaders. The CANDU reactor out of Canada can already do this. The ARC 100 and

Canadian Reactors that Re-use Nuclear Waste. 7.5 minutes.

https://www.youtube.com/watch?v=3u44skO-nMo

These are not the only nuclear waste burning reactors, but the fact that there already are solutions and that there are more solutions on the way, should allay any concerns about nuclear wastes going forward.

The U.S. is catching up on this but is still a bit behind.

Several U.S. companies are working on technology to **recycle nuclear waste and turn it into energy**[12345]. These companies include Oklo, TerraPower, Orano, and SHINE Technologies.

https://oklo.com/fuel-recycling/default.aspx

As you already know, Curio, a commercial nuclear waste recycling plant, plans to recycle **4,000 metric tons of high-level radioactive waste a year**[1]. In the future, it will be able to reprocess all 86,000 metric tons of U.S.-generated nuclear waste[2].

Nuclear Energy can be available quickly.

There are a number of N.R.C. approved reactors that could be ordered today and built, likely within this decade.

BWRX 1000 or BWRX 300	GE-Hitachi
AP 1000 or AP 300	Westinghouse
Candu 1000	Candu Corporation
NuScale 100	NuScale Energy

There are lots of coming options, most of which are Gen IV SMR's that do not use water as a coolant. Texas alone is coordinating a campus to house four of these.

Four SMR developers aim to build reactors at Texas A&M University site

https://www.world-nuclear-news.org/articles/four-smr-developers-aim-to-build-reactors-at-texas-am-university-site

Locally, X-Energy also is creating new Gen IV energy options.

The D.O.E.'s own Marvel reactor should come on-line this year.

The U.S. is catching up on recycling nuclear waste but is still a bit behind.

Several U.S. companies are working on technology to **recycle nuclear waste and turn it into energy**[12345]. These companies include Oklo, TerraPower, Orano, and SHINE Technologies.

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The bottom line here is that once re-use of spent nuclear fuel (nuclear waste) becomes widespread, there is no need to worry about any build-up of the nuclear waste stockpile. Further, so-called nuclear waste will become a major component of our uranium source.

Finally, one option I feel obliged to ask you to consider, even if it is not immediately available in the U.S. is that of thorium breeder reactors. They likely will not be available in the U.S. until the mid-2030's. But we should keep an eye on it, nonetheless. This is particularly true because most of Maryland's energy needs are not electrical. We still need to address transportation, manufacturing and agricultural energy needs.

Thorium as a game changer.

https://www.youtube.com/watch?v=HMv5c32XXoE

What is thorium?

Thorium vs Uranium Exploring the Future of Nuclear Energy Sources - A Sustainable Pathway to a Low-Carbon Future

Why not uranium?

Less than 1% of uranium is usable uranium 235. This means that while technically, thorium is three times as available as uranium in the earth's crust, for practical purposes, it is 3000 times more available for use in nuclear energy creation

Nuclear Fuel Facts: Uranium | Department of Energy

The U.S. Has tested and is now now producing thorium fuels. https://www.globenewswire.com/news-release/2024/11/12/2979394/0/en/Clean-Core-Achieves-Historic-Burnup-Milestone-with-its-Thorium-Fuel-at-US-National-Lab.html

Going Forward: While Maryland needs nuclear energy to power its grid, the bigger need is for heat for industrial, transportation or other uses. As we evaluate nuclear energy for our grid needs, we should keep this in mind. Some nuclear energy technologies are better than others for creating heat.

B. A Small Staff to Evaluate Options.

The short answer here is you need to pick someone you trust to help explain this to you so you and your constituents. Thus, within the Clean Energy Office there needs to be a clean energy department.They will need to be able to explain how various nuclear energy technologies will work, why they are safe, why they are needed, and which are the best, most affordable options. They will also have to be good at crafting deals to entice nuclear energy companies to build in Maryland soon. Finally, because many Marylanders are somewhat fearful of nuclear energy, it will be very useful to have expertise available to give them clear information as soon as they demand it.

C. A good, and likely available option.

We need to start with the fact that we need more energy for our grid and that that energy must be clean. Below, is a way to begin this. First, I am going to refer you to a presentation on the molten salt test reactor at Abilene Christian University by the chair of that program and by the CEO of Natura Resources.

Proof that I am not just blowing smoke.

Molten Salt Reactors - NEXT test Reactor & Natura Resource.

https://www.youtube.com/watch?v=HMv5c32XXoE

The bottom line here is that big energy users are offering up to 3.5 times the going rate for energy. We can use this to our advantage. Here is how, and this is also the answer to how we get reactors built more quickly and less expensively. It also explains the need for a deal-cutter in our Nuclear Energy office. I have included the video below, because I am primarily an environmental guy, not a nuclear energy guy. I thought you all might like to see some proof I am not making all of this up.

Say, Microsoft wants to build an A-I Center in or near Maryland in the PJM region. Say, at its peak energy use, it can use 920MWe. On Average, though, it uses only 700MWe. Now, reactors are NOT going to be manufactured in every distinct size. Most reactor designers will have one production model, some maybe two Most likely the Small reactor will be either 100MWe or 300MWe. It they also have a micro reactor, likely it will not produce more than 10MWe.

Microsoft, though, will want to ensure that it has enough energy. They will need at least enough electricity available for their maximum use. So, say they purchase 10 100 MWe reactors This would mean that at minimum, there would be an excess of electricity of 90MWe, but on average, an excess of 300MWe. Maryland, or PJM could purchase the excess at market price.

Could a deal be cut to ensure that Microsoft's excess 300MWe energy is available during peak Maryland use periods? It is certainly possible. One of the advantages of nuclear is that it can load-follow.

Further, 85MWe from a nuclear plant would be far more useful than 85MWe from battery storage, as it could provide energy through the duration of any energy drought. I am not suggesting not to build a short-term battery back-up system. But the emphasis there should be on fulfilling just a short-term need.

Say several large users have similar deals with nuclear plant, but have differing high and low energy use patterns. Suddenly our grid electricity shortage looks far less ominous. Plus, if we still need extra clean energy, we will already be familiar with the best available options.

As an important side point, we are in now positioned to train a new generation of nuclear energy leaders. Both the University of Maryland and Morgan State University now have nuclear engineering programs. This should put Maryland at the forefront of efforts to diversify the energy industry...if we help these programs move forward.

Summary: The Energize Maryland Act provides a great starting point for Maryland to enter the new nuclear age quickly, safely, and efficiently. The longer we wait to start, the further behind we will fall on our clean energy goals.

To get the best deals and to create the least emissions, need to start now. Please, pass this bill. Pass it quickly, Move to the front of the clean energy line.

SB 434_BOMA_FAV.pdf
Uploaded by: Bryson Popham
Position: FAV

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February 18, 2025

The Honorable Brian J. Feldman
Chair, Senate Education, Energy, and the Environment Committee
2 West Miller Senate Office Building
Annapolis, Maryland 21401

RE: Senate Bill 434 - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act - FAVORABLE

Dear Chairman Feldman and Members of the Committee,

I am writing in my capacity as the Legislative Chairman of the Building Owners and Managers Association of Greater Baltimore (BOMA) to respectfully request a favorable report on Senate Bill 434.

BOMA, through its nearly 300 members, represents owners and managers of all types of commercial property, comprising 143 million square feet of office space in Baltimore and Central Maryland. Our members' facilities support over 19,000 jobs and contribute $2.5 billion to the Maryland economy each year.

BOMA has been deeply involved with Senate leadership as you consider vitally important energy issues this session. We are pleased that Senate Bill 434 expressly validates the role of nuclear energy to help our State reach a clean energy future as existing coal-fired and oil-fired generators are retired.

We also agree with the publicly expressed concerns of Senate leadership about a looming electricity shortage. Promoting greater use of nuclear energy, which already meets 40% of electricity needs in Maryland, represents one obvious solution. Furthermore, Senate Bill 434 includes an important policy statement in its findings and declarations, by adding a goal to position Maryland to take advantage of benefits that may be provided by emerging small modular nuclear reactors. These are welcome additions to our State energy policy.

For these reasons we respectfully request a favorable report on Senate Bill 434.

Very truly yours,

Tim O'Donald

Tim O'Donald
Chair, BOMA Legislative Committee

cc: Bryson Popham

1Senate Oral Testimony Maryland Legislature 2-20-2
Uploaded by: Carol Lane
Position: FAV

Testimony of Carol Lane

Vice President for Government Relations

X-energy
Before the Senate Committee on Education, Energy, and Environment
February 20, 2025

Chairman Feldman and Vice Chair Kagan,

Thank you for the opportunity to testify. I'm Carol Lane, Vice President for Government Relations at X-energy, a Maryland-based advanced nuclear reactor company headquartered in Rockville. Founded in 2009, we employ about 450 people and expect to grow to 750-800 by year's end.

As a leading small modular reactor (SMR) developer, our technology offers key advantages:

- Our fuel – the core of our safety case is Meltdown-proof. The U.S Department of Energy has recognized it as the most robust on Earth
- Our reactors use no water in our reactor core—only inert helium gas.
- Our safety case results in a compact emergency planning zone (¼ mile), allowing siting near industrial hubs and data centers.
- Our reactor produces both electricity and high quality steam for industrial and heat applications

SMRs are approaching deployment in the early 2030s. Our first High-Temperature Gas-cooled Reactor (HTGR) will be built at a Dow Chemical facility in Texas, in partnership with the Department of Energy's Advance Reactor Demonstration Program. Additionally, we signed a partnership with Amazon to develop over 5 gigawatts of power - out through 2039.

While federal support has been crucial to reduce First of a Kind risks, state-level policies are now essential. This bill:

1. Recognizes nuclear energy's role, which currently generates 40% of Maryland's electricity and 82% of its clean energy.
2. Creates a nuclear procurement process, encouraging the Maryland PSC to consider new nuclear generation.
3. Updates Maryland's Renewable Energy Portfolio Standard to a Clean Energy Portfolio Standard, allowing SMRs and renewables to complement each other.

As a Maryland-based company, X-energy is committed to helping the state meet its clean energy goals.

Thank you, and I'm happy to answer any questions.

CCSA testimony_SB 434_2-20-2025.pdf
Uploaded by: Charlie Coggeshall
Position: FAV

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www.communitysolaraccess.org

RE: SB 434 – Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Favorable

Chair Feldman and members of the Senate Education, Energy, and the Environment Committee,

The Coalition for Community Solar Access (CCSA) provides this written testimony regarding Senate Bill (SB) 434. CCSA's position on this legislation is Favorable.

CCSA is a national, business-led trade organization, composed of over 100 member companies, that works to expand access to clean, local, affordable energy nationwide through the development of robust community solar programs. Community solar projects involve medium-scale solar facilities that are shared by multiple community subscribers who receive credit on their electricity bills for their share of the power produced.

CCSA has been an active participant in the development and implementation of Maryland's community solar pilot program, and we are grateful to this Committee and to Governor Wes Moore and his Administration for supporting the passage of SB 613 in 2023, which made community solar a permanent solution in Maryland. Thanks to SB 613, community solar can play a critical role in helping the state meet its energy requirements while also ensuring electricity cost savings reach those that need it most, as projects must allocate at least 40% of capacity for low-and-moderate income customers.

SB 434 would support the sustained growth of community solar and other renewable energy technologies in Maryland. It's responsive to the region's rapidly rising energy demand and the importance of long-term market certainty in driving clean energy deployment. It would also address shortcomings associated with Maryland's Renewable Portfolio Standard (RPS).

CCSA appreciates the Moore Administration for supporting solar power and for its dedication to solving the challenges associated with Maryland's energy needs. CCSA is supporting several proposals this session aimed at providing energy solutions for Maryland, including incentive levels and siting barriers specific to community solar. We look forward to continuing to work with the Administration and this Committee on these critical issues.

CCSA urges a favorable report on SB 434.

Sincerely,

Charlie Coggeshall
Mid-Atlantic Director, CCSA
charlie@communitysolaraccess.org

SB 434- Reclaim Renewable Energy Act of 2025.pdf
Uploaded by: Elizabeth Law
Position: FAV

BILL NUMBER:	**Senate Bill 434**
	Empowering New Energy Resources and Green Initiatives Toward a 2 Zero–Emission (ENERGIZE) Maryland Act
COMMITTEE:	**Education, Energy, and the Environment**
HEARING DATE:	**February 20, 2025**
SPONSOR:	**The President (By Request – Administration) and Senators Brooks, Ellis, and Watson**
POSITION:	**Favorable**

Chair Brian Feldman, Vice Chair Cheryl Kagen and Members of the Committee,

As a resident of Maryland and a professional electric power engineer I ask for a favorable report on Bill SB 434 – The ENERGIZE Maryland Act of 2025.

Maryland presently imports 40 % of the electric power it uses. Much of that energy is generated by fossil fuel plants in Pennsylvania and West Virginia. Not only does this put Maryland in a vulnerable position in terms of energy supply but we only serve to pollute some other state. Meanwhile we still are not reaching our climate action goals. Adjustments are called for.

The power industry is going through a time of great change. In some ways it is exciting given new advances in wind power generation and storage battery capabilities. On the horizon, Maryland needs to look to future developments in clean power generation. These include:

- Wave power, which has not begun to reach its potential. We are a state with a coastline and could see huge increases in wave power generation in the next 20 years.
- Nuclear power, both as Small Nuclear Reactors (SMRs) and Nuclear Fusion are 10 to 15 years away but are within the realm of possibly if cost and safety can be tackled.
- Offshore wind generation will suffer in the short term under the current Federal administration but could bounce back with a change in administration in 2028. In the meantime, Dominion Power has built the first of its fleet of factory ships capable of transporting and erecting the enormous blades and towers needed for offshore wind turbines. After completing projects in Virginia, Dominion could build wind projects along Maryland's coast.

I support the goal of facilitating construction of at least 3,000 megawatts of electricity from clean energy generation projects. This is a reasonable and achievable goal with current solar and

industrial scale battery systems. As the technological advancements mentioned above, Maryland can revise its goals and move closer to 100% clean energy generation.

Again, I ask for a Favorable Report.

Elizabeth Law. P.E. (retired)

1758 Wheyfield Dr.

Frederick, Maryland 21701

SB 434
Uploaded by: Jason Weintraub
Position: FAV

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Senator Brian J. Feldman

Chair, Senate Education, Energy, and the Environment Committee

2 West, Miller Senate Office Building
Annapolis, Maryland 21401

SB434

Dear Chair Feldman,

Solar Landscape supports SB434, sponsored by Senate President Ferguson and Senators Brooks, Ellis, and Watson. This bill advances Maryland's clean energy goals by encouraging solar development for all market sectors, particularly on commercial and industrial rooftops. **We respectfully urge a favorable report**.

Founded in 2012, Solar Landscape has brought the benefits of solar energy to more low- and moderate-income households than any other community solar developer nationwide. We specialize in commercial and industrial rooftop solar, partnering with real estate owners in Maryland, New Jersey, Illinois, and beyond. Nationwide, we have leased or have exclusive rights to over 150 million square feet of commercial and industrial rooftops, including space for over 50 community solar projects in Maryland. We are committed to helping Maryland achieve its renewable energy targets and advancing energy equity.

Maryland aims for 14.5% of its electricity to come from solar by 2030, yet deployment has lagged due to issues with the Solar Renewable Energy Credit (SREC) market and other policy challenges. Since 2018, installation rates for small and medium solar projects, particularly those under 5MW, have fallen short. The decline in Alternative Compliance Payment (ACP) values, and by extension SREC values, threatens the viability of solar on commercial and industrial rooftops. These projects, with simpler interconnection and permitting processes, can be permitted and built in approximately a year. They are essential to meeting Maryland's near-term clean energy goals.

SB434 provides a critical solution: extending the 14.5% solar requirement to 2035 and "freezing" the ACP at $60. This ensures SRECs remain valued at a level that incentivizes commercial/industrial rooftop solar development, particularly community solar, which delivers energy savings to Marylanders, including low- and moderate-income households. Supporting these projects saves families money, preserves open space, creates family sustaining jobs (i.e., 500 MWs of community solar equates to roughly 4-million-man hours of work) and is simply common sense.

Passing SB434 demonstrates a commitment to sustainability, job creation, and economic relief for Maryland's most vulnerable residents. We commend the Moore-Miller administration's leadership on clean energy and look forward to working together to ensure energy access for all Marylanders.

For questions, please contact Jason Weintraub at (410) 963-3674 or jweintraub@gfrlaw.com.

MDE SB434 SUP .pdf
Uploaded by: Jeremy D. Baker
Position: FAV

The Maryland Department of the Environment

Secretary Serena McIlwain

Senate Bill 434

Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Position: Support
Committee: Education, Energy, and the Environment
Date: February 20, 2025
From: Jeremy D. Baker, Government Relations Director

The Maryland Department of the Environment (MDE) **SUPPORTS** SB 434.

Bill Summary

Senate Bill 434 would rename Maryland's Renewable Portfolio Standard (RPS) as the "Clean Energy Portfolio Standard" and incorporate Tier 1 and Tier 2 renewable sources and nuclear energy. Additionally, SB 434 would establish the goal of meeting the State's energy needs with 100% clean electricity, increase the percentage of projects that must come from eligible clean energy sources, and create a new process for nuclear energy project considerations under the Maryland Public Service Commission (PSC). The PSC would be required to consider project applications that include a community benefit agreement, minority business enterprise participation, and economic and environmental analyses.

Position Rationale

Maryland's Climate Pollution Reduction Plan, which provides a comprehensive analysis of Maryland's opportunity to address climate change while building a green economy, recognizes that the current nuclear facility in the state, Calvert Cliffs Nuclear Power Plant, is important in producing an abundance of zero-emissions energy. By incorporating nuclear energy in the "Clean Energy Portfolio Standard," the State can account for more than 80% of in-state carbon-free generation, and it allows the state's clean energy goals to immediately be increased by 25%.

SB 434 would help Maryland reach its greenhouse gas emissions reduction goals and encourage clean energy sources, which benefit our economy and the public health of all Marylanders.

Accordingly, MDE asks for a **FAVORABLE** report for Senate Bill 434.

Contact: Jeremy D. Baker, Director of Government Relations
Cell: 240-548-3321, Email: jeremy.baker@maryland.gov

Chaberton Energy- John Miller- SB 0434 Written Tes

Uploaded by: John Miller

Position: FAV

February 18, 2025

To: Senate Education, Energy, and the Environment Committee

Re: **SB0434**: Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland- **Favorable**

Dear Members of the Education, Energy, and Environment Committee of the Maryland General Assembly:

My name is John Miller. I live in Woodstock, Howard County, Maryland. I represent Chaberton Energy, a local Maryland based renewable energy developer with offices at 1700 Rockville Pike, Suite 305, Rockville, Montgomery County, Maryland. Chaberton is a leading developer in the Maryland Community Energy Generating Systems ("CSEGS") Program and was named the 34th fastest-growing private company and 1st fastest-growing community solar company in the United States on the 2024 Inc. 5000.

Chaberton Energy was built upon the framework that the State set up with the Community Solar Program. In nearly five years, we have grown and now employ over 50 people, with 20 located in Maryland. We have multiple solar projects operating in Maryland, as well as a robust pipeline of projects in construction and development.

The projects we develop deliver real and tangible benefits to your constituents, the residents of Maryland. We save Marylanders an average of $150 annually per household on their utility costs; and each Community Solar project supports well over $2.5M in savings for subscribers, all of whom reside in Maryland and many of whom are Low to Moderate Income (LMI) subscribers. As an industry, we support ensuring the benefits of solar energy flow to those who need it most. The energy bill savings we can offer to LMI subscribers are often even greater and provide a necessary lifeline to those struggling to meet basic needs, including increased energy costs.

The most recent report on the Renewable Portfolio Standard (RPS) shows that the State is well behind in meeting its energy goals. Specifically, per the latest report for 2023, the State only met ~44% of its obligations of RPS, which led to over $320M in alternative compliance penalty payments levied on the utilities. It will be necessary for Maryland to meet, and exceed, its clean energy goals to ensure a safe, reliable, cost effective, and equitable energy policy. According to data from the Energy Information Administration, Maryland consumes almost six times more energy than it produces, and according to the Tean Year Plan produced by the Public Service Commission, Maryland imports approximately 40% of its electricity consumption, meaning that the State is very reliant on energy which Maryland does not generate. This issue has been recently exacerbated by the PJM capacity auction which has already begun to have significant financial impacts on the energy bills for all Marylanders. The optimal kilowatt-hour is one that is both produced and consumed in Maryland.

We commend the Administration, President Ferguson, and Senators Brooks, Ellis, and Watson in addressing the needs of the State through the ENERGIZE Maryland Act. Making the shift from a 'Renewable Portfolio Standard' to a 'Clean Energy Standard' increases the flexibility the State has to implement clean energy and address the impacts of climate change. As stated in the Act, the current RPS and Offshore Wind Leases are insufficient for the State to reach its goals, and we support increased efforts to generate clean electricity in Maryland. Providing additional certainty on the value of the Alternative Compliance Payment will spur additional development of clean energy projects in the State, and this additional project development activity will lead to increased economic growth, job creation, and a cleaner environment in Maryland.

Support for clean energy is support for a strong local job market. The 2024 U.S. Energy & Employment Jobs Report ("USEER") from the U.S Department of Energy finds that in 2023 jobs in clean energy grew at more than twice the rate of the overall labor market. The clean energy job market also delivers higher representation than average among Veterans, as well as the Latino and Hispanic population. This report lists 82,926 clean energy jobs in Maryland, representing 4.7% of total state employment, but does show a lower-than-average growth rate of 1.8% from 2022 – 2023. However, the expected growth for Maryland is higher than average, showing that the investments made into the clean energy economy in Maryland are succeeding, and continued support for clean energy is a key contributor to good jobs and a strong economy.

In order to keep building on the successes of Maryland, and to keep fostering jobs for a strong local economy, stimulating tax revenue, saving the people of Maryland money on their energy bills, it is imperative that the State take a proactive approach to its energy needs. We ask that the Education, Energy, and the Environment Committee issue a favorable report on SB 0434.

Respectfully Submitted,

John Miller
Chaberton Energy
Vice President of Development

LOS SB 434 ENERGIZE - CI.pdf
Uploaded by: Joshua Feldmark
Position: FAV

SB 434: Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Position: SUPPORT

Dear Chair, Vice Chair, and Members of the Committee,

CI Renewables is a Maryland based solar developer specializing in commercial and industrial but within that, CI also specializes in work with municipalities, universities, schools, and hospitals. Our projects range from standard ground mount to projects on brownfields as well as rooftops, parking garages, and parking canopies. While we have developed projects in 20 states, Maryland remains our home and where we understand the markets the best.

The ENERGIZE Maryland Act has only one small section that impacts solar. On page 23, lines 15 and 21 are brackets that will result in a freeze of the Alternative Compliance Payment (ACP) rate at the 2024 level. The administration is introducing a critical amendment which would make this frozen price only eligible to new projects guaranteeing that this will positively impact the building of new solar projects in Maryland.

We know that this freeze to spur the solar industry. If implemented, solar projects, including many rooftop and carport projects, become financeable and built at a significantly higher rate than projected today. Without this or alternatively a more permanent solution to the RPS program, reaching our 14.5% carve out is nearly impossible.

I must make sure to be perfectly clear and honest with you, that unlike The Brighter Tomorrow Act from last year, this WILL have an impact on ratepayers. I am happy to "show my work" but the impact will be, by our calculation, $0.000167/kWh. Since the average retail customer averages 968 kWh/month the ratepayer impact will be 16¢/month.

Every single option on the table will likely cost the ratepayers in the short term but with solar, because of the RECs, the impact is direct and clear. With the capacity crisis already causing horrendous electric bill increases across the state, we very much understand the desire to avoid any additional impacts to ratepayers.

That being said, the current ACP step down, for those not eligible for the Brighter Tomorrow multiplier, is becoming dangerously close to making the Maryland market – unbuildable and so this is a problem that will need to be addressed. The freeze, as similar approaches have worked elsewhere, would drive developers to build more in the state until we are satisfying RPS and therefore lowering the cost of a MD SREC relative to SACP. When we reach that threshold ratepayers begin paying less.

We respectfully urge the Committee to provide a favorable report on SB 434. Should you have any questions, please feel free to contact me.

Sincerely,

Joshua Feldmark
Senior Vice President
Joshua.feldmark@cirenew.com

Maryland Catholic Conference_FAVSB434_.pdf
Uploaded by: Michelle Zelaya
Position: FAV

MARYLAND CATHOLIC CONFERENCE

February 21, 2025
SB434
Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act
Education, Energy, and the Environment Committee
Position: Favorable

The Maryland Catholic Conference offers this testimony in support of **Senate Bill 434** Catholic Conference is the public policy representative of the three (arch)dioceses serving Maryland, which together encompass over one million Marylanders. Statewide, their parishes, schools, hospitals and numerous charities combine to form our state's second largest social service provider network, behind only our state government.

Senate Bill 434 is a comprehensive legislative initiative aimed at advancing the state's transition toward a zero-emission energy future. This bill renames the "renewable energy portfolio standard" to the "clean energy portfolio standard" and strengthens Maryland's commitment to clean energy by increasing the minimum percentage of energy required from clean sources over time. The legislation revises the definition of "qualified offshore wind project," adjusts compliance fees for shortfalls in Tier 1 renewable sources, and streamlines the approval process for offshore wind and nuclear energy projects. It also establishes new mechanisms for minority-owned businesses to participate in clean energy initiatives and renames and reinstates the Maryland Offshore Wind Business Development Fund and Advisory Committee to focus on broader clean energy development.

The ENERGIZE Maryland Act reflects the principles of Catholic social teaching by prioritizing care for creation, human dignity, and the common good. The moral imperative to steward God's creation calls for decisive action to reduce our reliance on fossil fuels and invest in clean energy solutions. This bill aligns with the ethical responsibility to address climate change, an urgent issue that disproportionately affects the poor and vulnerable. Additionally, reducing greenhouse gas emissions and transitioning toward sustainable energy sources fulfill the obligation to future generations. The moral principle of subsidiarity—empowering local communities to make decisions that affect their well-being—is reflected in this bill's efforts to create local clean energy jobs and ensure equitable participation in the clean energy economy.

The transition to clean energy sources has profound implications for public health, economic opportunity, and environmental justice. Many communities, particularly low-income and marginalized populations, suffer disproportionately from pollution caused by fossil fuel-based energy production. This bill directly addresses those disparities by prioritizing clean energy expansion, reducing emissions, and mitigating the harmful effects of air pollution, which have been linked to respiratory and cardiovascular illnesses.

By expanding access to clean energy and ensuring that its economic benefits are equitably distributed, the bill promotes solidarity and economic justice. Supporting minority-owned businesses and requiring nuclear energy projects to comply with the Minority Business Enterprise Program fosters inclusion and ensures that historically disadvantaged groups have a stake in Maryland's clean energy future. Let's prioritize our health and make Maryland clean.

For these reasons, the Maryland Catholic Conference urges a favorable report on **Senate Bill 434.**

Testimony in support of SB0434 - Empowering New En

Uploaded by: Richard KAP Kaplowitz

Position: FAV

SB0434_RichardKaplowitz_FAV
02/20/2025

Richard Keith Kaplowitz
Frederick, MD 21703

TESTIMONY ON SB#/0434- POSITION: FAVORABLE

Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

TO: Chair Atterbeary, Vice Chair Wilkins, and members of the Education, Energy and the Environment Committee
FROM: Richard Keith Kaplowitz

My name is Richard Keith Kaplowitz. I am a resident of District 3, Frederick County. I am submitting this testimony in support of SB#/0434, **Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act**

In 2022 Maryland committed to the Climate Solutions Now Act of 2022 which committed the state to reduce our dependence on fossil fuels usage. The act requiring the State to reduce statewide greenhouse gas emissions by altering statewide greenhouse gas emissions goals, establishing of a net-zero statewide greenhouse gas emissions goal, developing certain energy efficiency and emissions reduction requirements for certain buildings, requiring electric companies to increase their annual incremental gross energy savings, establishing certain zero-emission vehicle requirements for the State fleet, and establishing an electric school bus pilot program.

This bill supports that mission on the reduction of the use of fossil fuels due to their negative impact on the environment.

- "What is the link between fossil fuels and climate change? When fossil fuels are burned, they release large amounts of carbon dioxide, a greenhouse gas, into the air. Greenhouse gases trap heat in our atmosphere, causing global warming. Already the average global temperature has increased by 1C." [1]
- Burning fossil fuels releases nitrogen oxides into the atmosphere, contributing to the formation of smog and acid rain. The presence of excess nitrogen in the atmosphere in the form of nitrogen oxides or ammonia is deposited back onto land, where it washes into nearby water bodies. [2]

[1] https://www.clientearth.org/latest/news/fossil-fuels-and-climate-change-the-facts/#:~:text=What%20is%20the%20link%20between,temperature%20has%20increased%20by%201C.

[2] https://www.epa.gov/nutrientpollution/sources-and-solutions-fossil-fuels#:~:text=Burning%20fossil%20fuels%20releases%20nitrogen,washes%20into%20nearby%20water%20bodies.

SB0434_RichardKaplowitz_FAV

In recognition of the need to reduce the use of fossil fuels in Maryland this bill will jumpstart this process by renaming the "renewable energy portfolio standard" to be the "clean energy portfolio standard". It will alter the minimum required percentage of energy that must be derived from clean energy sources in certain years under the clean energy portfolio standard. It will support the use of offshore wind as a source of clean energy by altering the contents of and approval criteria for an application for an offshore wind project. It will govern the process of integrating nuclear energy as an energy source for Maryland by establishing a process for the Public Service Commission to review and approve an application for a proposed nuclear energy generation project.

The Brookings Institute studied *Why are fossil fuels so hard to quit?* [3] I recommend their analysis of how the world came to depend on fossil fuels; oil, coal and gas and how that developed. The fossil fuel industry funds much of our politics and politicians. But they are not looked long-term on winding down the use of their product before climate change, already happening, reaches a point that affects the long-term survival of the human race. I urge you to ask them what they will do when climate change from their products overwhelms the planet's ability to compensate.

I respectfully urge this committee to return a favorable report on SB#/0434.

[3] https://www.brookings.edu/articles/why-are-fossil-fuels-so-hard-to-quit/

M&A_Sebastian Feculak_IWDCMS_HB505 SB434_ENERGIZE_

Uploaded by: Roger Manno

Position: FAV

TESTIMONY OF SEBASTIAN FECULAK
POLITICAL DIRECTOR, IRONWORKERS DISTRICT COUNCIL OF THE MID-ATLANTIC STATES

BEFORE THE SENATE EDUCATION, ENERGY, AND ENVIRONMENT COMMITTEE AND HOUSE ECONOMIC MATTERS COMMITTEE

IN SUPPORT OF HB 505 / SB 434 – THE ENERGIZE MARYLAND ACT

Chairs Feldman and Wilson, Vice Chairs, and Members of the Committees,

The Ironworkers District Council of the Mid-Atlantic States represents thousands of skilled ironworkers across Maryland and the surrounding region. Our members are the backbone of the construction industry, responsible for building and maintaining the energy infrastructure that powers homes, businesses, and industry. The ENERGIZE Maryland Act (HB 505 / SB 434) is a necessary step toward a stronger, cleaner, and more reliable energy future—one that ensures Maryland remains a leader in energy innovation while protecting and creating union jobs.

A clean energy transition must be built on a foundation of both reliability and economic opportunity. This bill accomplishes both by expanding Maryland's clean energy portfolio in a way that prioritizes energy stability while maximizing investments in local infrastructure projects and the skilled workforce that builds them.

Strengthening Maryland's Energy Infrastructure Through Nuclear Expansion
One of the most significant steps in this bill is the recognition of nuclear energy as a clean energy source within the Clean Energy Portfolio Standard. Maryland already benefits from carbon-free, high-output nuclear power, and this designation ensures that we maintain a reliable baseload energy source while modernizing the grid. The bill also establishes a competitive procurement process for advanced nuclear reactors, similar to the existing Offshore Wind Renewable Energy Credit (OREC) program, which will encourage investment in next-generation nuclear technology, driving new construction projects that will require ironworkers to fabricate and erect these facilities.

Reforming Offshore Wind Procurement to Protect Ratepayers and Expand Job Opportunities
Maryland has already seen strong investments in offshore wind, but existing statutory rate caps have created inefficiencies. Currently, offshore wind developers bidding into the OREC process know the maximum price they can charge, limiting the state's ability to secure cost-effective

projects. This bill removes those statutory caps and allows the Public Service Commission (PSC) to set pricing parameters during solicitations—a move that will ensure more competitive bidding, lower costs for ratepayers, and better value for Maryland's energy investments.
Additionally, the bill relaxes the Delmarva Peninsula interconnection requirement, giving developers more flexibility in how they bring offshore wind energy onto the grid while maintaining commitments to Maryland's workforce and local investment. A modest payment requirement for future project cancellations will also protect the state from costly failures, ensuring that Maryland does not end up covering expenses when developers fail to follow through on their commitments—an issue that has already played out in New Jersey with Ørsted's recent project cancellations.

Improving Solar Energy Competitiveness to Spur Growth and Job Creation
Maryland has struggled to maintain a competitive solar industry due to the low value of its Solar Renewable Energy Credits (SRECs). Neighboring states have higher alternative compliance payments (ACPs), creating more incentives for solar project development. Without intervention, Maryland risks falling behind in solar deployment and losing the associated construction jobs to other states.

This bill freezes the declining ACP cap at its 2024 level of $60, providing more price stability for new solar projects and making Maryland a more attractive market for solar development. This will help expand the pipeline of solar projects and create more work opportunities for ironworkers who install solar racking systems and other supporting infrastructure.

Ensuring Accountability and Progress Toward Clean Energy Goals
By 2032, the Maryland Energy Administration (MEA), in consultation with the PSC, will report on the impact of this legislation—including an analysis of the effectiveness of multipliers set in the Brighter Tomorrow Act (2024), the impact of freezing the ACP, and overall progress toward Maryland's 100% clean electricity target. This accountability measure ensures that the policies implemented today remain effective in the years ahead and that Maryland's clean energy transition is guided by real-world data and workforce considerations.

A Clean Energy Future That Puts Maryland's Workers First
For ironworkers, energy infrastructure is more than just policy—it is what we build. The ENERGIZE Maryland Act aligns with the reality that a clean energy future must also be a strong union jobs future. The expansion of nuclear, offshore wind, and solar energy creates thousands of opportunities for skilled ironworkers to fabricate, assemble, and erect the structures that will power Maryland for generations to come.

Maryland's energy policy must balance sustainability, reliability, and economic opportunity. HB 505 / SB 434 achieves that balance by supporting investments in clean energy while ensuring that these projects translate into stable, well-paying union jobs.
For these reasons, the Ironworkers District Council of the Mid-Atlantic States urges a favorable report on HB 505 / SB 434.

Sincerely,

Sebastian Feculak
Political Coordinator Mid-Atlantic States District Council

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Largo, MD 20774
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o : 301 599 0960
f : 301 599 0962

2025_02_20 SB 434 Support.pdf
Uploaded by: Tiffany Clark
Position: FAV

CAROLYN A. QUATTROCKI
Chief Deputy Attorney General

LEONARD J. HOWIE III
Deputy Attorney General

CARRIE J. WILLIAMS
Deputy Attorney General

ZENITA WICKHAM HURLEY
Chief, Equity, Policy, and Engagement

STATE OF MARYLAND
OFFICE OF THE ATTORNEY GENERAL

ANTHONY G. BROWN
Attorney General

PETER V. BERNS
General Counsel

CHRISTIAN E. BARRERA
Chief Operating Officer

February 18, 2025

TO: The Honorable Brian J. Feldman
Chair, Education, Energy, and the Environment Committee

FROM: Tiffany Johnson Clark, Chief, Legislative Affairs, Office of the Attorney General

RE: **Senate Bill 434** – Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act– **Support**

The Office of Attorney General ("OAG") respectfully urges this Committee to report favorably on **Senate Bill 434** – ENERGIZE Maryland Act. **Senate Bill 434** aims to advance Maryland's goal of achieving zero-emission energy by bolstering clean energy portfolio standards, enhancing offshore wind and nuclear project application processes, and expanding Maryland's clean energy sources.

Senate Bill 434 seeks to achieve Maryland's goal of achieving 100 percent clean energy through various mechanisms. If passed the bill would annually increase the required minimum percentage of Maryland's energy derived from clean energy sources. The bill also renames the renewable energy portfolio standard to the "Clean energy portfolio standard" and outlines what percentage of Maryland's clean energy sources should come from Tier 1 and Tier 2 renewable energy sources.

Senate Bill 434 offers opportunities for small, minority-, women-, and veteran-owned businesses and investors to participate in Maryland's clean energy industry, expanding access for Marylanders who have been historically underrepresented in the clean energy industry which is in alignment with the Attorney General's goal to advance equity and justice for all Marylanders.

Additionally, the Governor's Office of Small, Minority, and Women Business Affairs, in consultation with the OAG and an approved applicant, must set clear minority business enterprises ("MBE") participation goals and procedures for each phase of a nuclear energy generation project within six months after the project's approval. **Senate Bill 434** also requires electricity suppliers to document the level of MBE participation in activities supporting the creation of renewable energy credits and tasks an Advisory Committee with providing recommendations to the Governor's Administration on how to financially maximize opportunities for emerging businesses

in the State, including MBEs, to participate in clean energy. **Senate Bill 434** balances advancing Maryland's goal of achieving zero emissions while increasing Marylanders' economic opportunities in and access to the clean energy industry.

For the foregoing reasons, the Office of the Attorney General urges a favorable report on **Senate Bill 434**.

Cc: Committee Members

SB434 FWA PHI 2.20.25.pdf
Uploaded by: Anne Klase
Position: FWA

February 20, 2025

112 West Street
Annapolis, MD 21401

Support with Amendments – Senate Bill 434 – Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Potomac Electric Power Company (Pepco) and Delmarva Power & Light Company (Delmarva Power) support with amendments **Senate Bill 434 - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act**. Senate Bill 434 updates Maryland's Renewable Portfolio Standard, incorporates nuclear energy as an eligible resource to help achieve 100% clean electricity in Maryland, updates the offshore wind (OSW) solicitation process by authorizing the Public Service Commission (PSC) to set an undisclosed ratepayer impact cap, removes the requirement for OSW to interconnect on the Delmarva Peninsula, establishes a procurement framework to support the development of both traditional nuclear power plants and advanced small modular reactors (SMRs) within the state, and supports minority business enterprises (MBE).

Pepco and Delmarva Power support this legislation as it looks to increase generation in Maryland at a time when there is a growing imbalance between electricity supply and demand driven by increased electrification, the rapid retirement of thermal generators, and challenges in bringing new power resources online. Resource adequacy is a pressing issue nation-wide and is of particular concern in Maryland. Achieving resource adequacy requires a holistic view of solutions, including solutions from Maryland, PJM, and Maryland utilities. More resources are needed as soon as possible—power plants (renewable and natural gas), energy storage, and demand-side capabilities. This legislation has the ability to support new nuclear generation in the state by providing long-term financing for the energy produced. However, we recommend revising the pricing structure for nuclear projects as envisioned in this legislation.

Pepco and Delmarva Power support the goal of Senate Bill 434, to promote clean energy generation. However, we recommend revising the pricing structure for nuclear projects as envisioned in this legislation. Senate Bill 434 requires utilities to enter into long-term pricing arrangements to stabilize revenue streams for nuclear power plants amidst fluctuating electricity prices. However, nuclear projects are inherently complex and susceptible to delays or cancellations and significant cost overruns. In the event of such cost overruns, delays or failures, ratepayers may still bear the financial burden associated with the agreements. To address these concerns, Pepco and Delmarva Power recommend revising the pricing schedule to ensure that costs are not unfairly shifted to ratepayers. Revising the nuclear pricing schedule will ensure that energy remains affordable and reliable in the near term and result in net economic benefits over the long term.

Additionally, Senate Bill 434 makes changes to the RPS that would apply retroactively. Pepco and Delmarva Power recommend removing the retroactive provision to protect existing standard offer service contracts for future delivery. A provision that existing obligations or contract rights may not be impaired in any way should be included.

Pepco and Delmarva Power commend the Governor for including language in the legislation to provide support for MBE's by requiring that applicants for nuclear energy projects comply with the Minority Business Enterprise Program and within six months of project approval establish a clear plan for setting reasonable and appropriate minority business enterprise participation goals and procedures. Pepco and Delmarva Power are committed to ensuring equity in the energy transition by prioritizing vulnerable and under-resourced communities through reducing barriers and making energy technologies that help combat climate change more accessible. Supplier diversity is a key part of Pepco and Delmarva Power's commitment to powering the economies of its local and diverse communities.

Pepco and Delmarva Power are committed to working with the Administration on the proposed amendments and request a favorable report on Senate Bill 434 with amendments. Together, we can ensure that Maryland's energy future is both clean and economically sustainable.

Valencia McClure | Anne Klase | Allyson Black-Woodson | Poetri Deal | 410 980 5347

SB434 - ENERGIZE Act Testimony.docx.pdf
Uploaded by: Benjamin Ford
Position: FWA

Testimony in FAVOR WITH AMENDMENTS for Senate Bill 434

2/18/2025

Dear Chair Feldman and esteemed members of the Education, Energy, and Environment Committee,

On behalf of ShoreRivers, I am writing to express our position of **FAVORABLE WITH AMENDMENTS** for **SB434 – Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act.** As a science-based advocacy and restoration organization dedicated to protecting and restoring the waterways of Maryland's Eastern Shore, we urge the Committee to **amend SB434 and issue a favorable report** on this critical legislation.

As an organization committed to clean water, environmental justice, and community resilience, ShoreRivers recognizes that climate change directly impacts our ability to fulfill our mission. We have seen firsthand the devastating effects of rising waters, increased nutrient pollution from extreme rainfall, and damage to critical oyster and wetland restoration projects—challenges that will only worsen without immediate action. We applaud the intent of SB434 and agree that **moving towards clean, abundant energy is critical if we want to limit or mitigate the worse outcomes associated with Climate Change.** Of concern, however, is calling particular energy generation "Clean" when they are anything but.

All of the energy sources currently listed as "Tier 1" energy sources within the States Renewable Energy Portfolio (RPS) are genuinely renewable, but renaming them "Clean" risks greenwashing the very valuable goals of the ENERGIZE Act. Listed within the Tier 1 energy sources are trash-to-energy, refuse-derived fuels, anaerobic digestion, and poultry litter-to-energy. Under the ENERGIZE Act, as written, these would now be known as "clean" sources of energy in Maryland, which common sense illustrates they are not. **All of these renewable energy sources generate significant carbon emissions and are thus not "clean" by any definition.** The combustion of methane, regardless of its source, produces two major byproducts: water (H_2O) **and carbon dioxide (CO_2)**.

Additionally, methane leaks from production and transportation are a potent greenhouse gas concern. **Energy sources that emit CO_2 and other greenhouse gases should not, and cannot reasonably, be considered "clean" energy. Therefore, these sources should be excluded from the RPS and any future "Clean" Energy Portfolio.**

We urge the Committee to amend SB434 to **either remove poultry litter-to-energy, waste-to-energy, refuse-derived fuels, and anaerobic digestion as "Tier 1" renewable or clean energy sources** or **amend SB434 to read "Renewable" rather than "Clean" in every instance**.

Currently, the RPS states that:

> "It is the intent of the General Assembly to: (1) recognize the economic, environmental, fuel diversity, and security benefits of renewable energy resources; [and] (2) reduce

ShoreRivers
Isabel Hardesty, Executive Director
Annie Richards, Chester Riverkeeper | Matt Pluta, Choptank Riverkeeper
Ben Ford, Miles Wye Riverkeeper | Zack Kelleher, Sassafras Riverkeeper

shorerivers.org | 443.385.0511 | info@shorerivers.org

greenhouse gas emissions and eliminate carbon-fueled generation from the State's electric grid by using these resources."

Because anaerobic digestion produces methane—a greenhouse gas **28 times more potent than carbon dioxide at trapping heat—and its combustion results in CO_2 emissions, its inclusion in a renewable or clean energy portfolio is inappropriate.**

Furthermore, the inclusion of carbon-emitting energy sources such as poultry litter-to-energy and anaerobic digestion, trash-to-energy, and refuse-derived fuels and their associated Renewable Energy Credits (RECs) within the state RPS discourages the transition to **truly clean, renewable energy**. Additionally, anaerobic digestion produces **digestate**, which requires proper management to prevent environmental harm, including nutrient pollution. Poorly managed digesters or methane-burning facilities can also generate **strong odors**, negatively impacting surrounding communities.

Using public funds to incentivize dirty energy would allow the producers of these "waste" products to increase the production of these problematic sources rather than move towards sustainable, viable, and responsible practices.

For these reasons, we urge the Committee to amend SB434 to **remove anaerobic digestion from the Tier 1 list within the RPS** or **amend SB434 to read "Renewable" rather than "Clean",** and then issue a **favorable report** for SB434.

Thank you for your leadership in addressing this urgent issue.

Sincerely,

Benjamin Ford, Miles-Wye Riverkeeper, on behalf of ShoreRivers

Equinor ENERGIZE Testimony.pdf
Uploaded by: Carlie Clarcq
Position: FWA

February 20, 2025
Education, Energy, and the Environment Committee
Chair Brian J. Feldman
Vice Chair Cheryl C. Kagan
SB0434 - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Favorable with amendments

Dear Chair Feldman, Vice Chair Kagan, and esteemed members of the Education, Energy, and the Environment Committee,

Equinor Wind LLC (Equinor) writes today to encourage the Committee to favorably support with amendments SB0434, *Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act*. Equinor is a broad energy company which has been active in the U.S. for over 36 years, delivering safe and reliable energy solutions to communities across the country. As a global leader in offshore wind development, Equinor leverages decades of offshore expertise to develop projects worldwide. Most recently, Equinor acquired Lease Area OCS-A 0557, located 26 nautical miles from Delaware Bay, with the potential to provide over 2 GW of renewable energy to the Pennsylvania-New Jersey-Maryland (PJM) grid.

We believe that the all-of-the-above energy approach created in SB0434 will be essential to meet rising energy demand and ensure Maryland's grid will maintain its reliability with the interests of Maryland ratepayers at the forefront. We appreciate the bill's acknowledgement that offshore wind will be an important piece of this puzzle. The industry has enormous potential to provide affordable and reliable home-grown energy at a utility scale to the region, while creating domestic jobs, incentivizing local economic development, and supporting manufacturing opportunities.

SB0434's provisions authorizing the Maryland Public Service Commission (PSC) to implement confidential ratepayer impact caps will facilitate solicitations that are competitive and aligned with the changing needs of the Maryland grid over time. Critically, the legislation must also create a viable pathway for future offshore wind procurements by including language that provides the PSC with the explicit ability to solicit offshore wind projects and coordinate with other states to do so. Cementing a future procurement process will ensure that Maryland can maximize benefits from the offshore wind industry. Doing so also delivers an important market signal for offshore wind developers and proves that Maryland is committed to the sustainable growth of the industry in the long-term.

Further language can be added to the legislation to strengthen the flexibility of Maryland's offshore wind solicitation program, which minimizes risks to projects and therefore reduces Offshore Wind Renewable Energy Certificates (OREC) prices. These include many of the provisions outlined in the PSC's *Maryland Offshore Wind Roadmap to 8.5 GW*, such as ensuring that the PSC has the ability to index OREC prices based on inflation, interest rates, and engineering, procurement and construction costs. Additionally, Equinor supports language that will create a competitive landscape for all energy resources and protect ratepayer interests. For example, offshore wind projects should have the ability to secure contracts up to 30 years, which will provide greater pricing certainty and has the potential to reduce costs. This would mirror language in the bill allowing 30-year contracts for nuclear projects.

SB0434 also builds upon previous statutes to create a robust offshore wind industry, including efforts to build coordinated transmission infrastructure to support offshore wind and improve grid stability. Ensuring that transmission procurements move forward in Maryland, due to the long lead time on transmission infrastructure planning and construction, is necessary and vital for the industry to prosper long-term. Because Maryland's grid is closely connected with neighboring states through PJM, the legislation should provide the PSC explicit authority to collaborate on transmission solutions with other states in the region, which will allow for mutual benefits and enhance regional cooperation.

Equinor commends the Education, Energy, and the Environment Committee for their important work on these crucial issues and is appreciative of the opportunity to provide feedback. We respectfully request your favorable support with amendments on this bill. We welcome further discussion and encourage Committee members to contact us any time at the email address below.

Sincerely,

Carlie Clarcq

Carlie Clarcq
Senior Manager of External Affairs
Equinor Renewables Americas
cacl@equinor.com

BGE_SWA_EEE_Senate Bill 434 - Empowering New Energ
Uploaded by: Dytonia Reed
Position: FWA

Position Statement

Support with Amendments
Education, Energy, and Environment
2/20/2025

Senate Bill 434 - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Baltimore Gas and Electric Company (BGE) supports *Senate Bill 434* with amendments. This bill aims to establish a state goal of achieving 100% clean electricity and redefines the Renewable Energy Portfolio Standard (RPS) as the Clean Energy Portfolio Standard (CEPS). The CEPS expands the definition of "clean energy" to include nuclear energy and reduces the emphasis on offshore wind. It mandates progressive increases in clean energy targets, starting with 60.5% by 2025 and reaching 75% by 2030, incorporating solar, geothermal, offshore wind, and nuclear energy. *Senate Bill 434* also establishes a process for the Public Service Commission (Commission) to review and approve applications for proposed nuclear energy generation projects, including outlining a pricing schedule for nuclear energy.

BGE fully supports the goal incentivizing in-state generation, including nuclear generation, to meet near-term energy supply and demand challenges in the State. The bill appears poised to support new nuclear generation in the state by providing long-term financing for the energy produced. However, we recommend revising the pricing structure for nuclear projects as envisioned in this legislation.

Senate Bill 434 requires utilities to enter into long-term pricing arrangements to stabilize revenue streams for nuclear power plants amidst fluctuating electricity prices. However, nuclear projects are inherently complex and susceptible to delays or cancellations and potential cost overruns. Furthermore, *Senate Bill 434* retroactively alters provisions of the Renewable Portfolio Standards with exempting existing contracts.

To address these potential concerns, BGE recommends two amendments that offer protections to electricity customers and energy markets. *HB 505* should:

1) Grant the Commission flexibility to alter long-term pricing schedules and limit cost overruns to avoid ratepayer impacts. This flexibility will help ensure that energy remains affordable and reliable in the long term.
2) Remove retroactive RPS provisions and grandfather existing arrangements to protect existing standard offer service contracts for future delivery.

With these amendments, BGE supports *HB 505* and respectfully requests a favorable report.

Charles Washington| Brittany Jones | Guy Andes| Dytonia Reed| 410.269.5281

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MAREC ACP Oceantic FAV w Amendment MD ENERGIZE Act

Uploaded by: Evan Vaughan

Position: FWA

February 20, 2025

Senator Brian Feldman, Chair
Maryland Senate Education, Energy, and the Environment Committee
2 West
Miller Senate Office Building
Annapolis, Maryland 21401

American Clean Power, MAREC Action & Oceantic Network: SB0434/HB0505, FAVORABLE with amendments

Dear Chairman Feldman, Vice Chair Kagan, and members of the Senate Education, Energy, and the Environment Committee,

American Clean Power, MAREC Action, and the Oceantic Network, organizations representing stakeholders across Maryland's offshore wind industry, take a position of favorable with amendments on the Administration's Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act, SB0434/HB0505.

The **American Clean Power Association** (ACP) is the leading voice of today's multi-tech clean energy industry, representing over 800 energy storage, wind, utility-scale solar, clean hydrogen and transmission companies. ACP is committed to meeting America's national security, economic and climate goals with fast-growing, low-cost, and reliable domestic power.

MAREC Action is a Maryland-based coalition of over 50 utility-scale solar, wind, and battery storage developers, wind turbine and solar panel manufacturers, and public interest organizations dedicated to promoting the growth and development of renewable energy in Maryland and across the PJM grid.

Over 10 years ago, Maryland businesses founded the Business Network for Offshore Wind (our name until we rebranded to Oceantic Network last year) to help companies better understand the opportunities that would come with the development of offshore wind. Now, as the **Oceantic Network,** we envision a thriving ocean renewables industry powering strong economies. Our collaborative global nonprofit network advances ocean renewables markets and builds robust supply chains of local companies, with a focus on minority-, women-, and veteran-owned businesses.

On behalf of our organizations, thank you for the opportunity to provide testimony on the ENERGIZE Act, SB0434/HB0505.

Critically, the Act would codify Governor Wes Moore's campaign pledge to achieve 100% clean electricity in Maryland. The offshore wind industry stands ready to support the Governor's goal as the largest-scale clean energy resource currently planned to serve Maryland consumers.

Beyond establishment of the 100% clean energy mandate, the ENERGIZE Act takes several important actions related to offshore wind. Specifically, we support the following provisions of the ENERGIZE Act:

- Reaffirmed authority for the Public Service Commission (PSC) to issue additional Round 2 Offshore Renewable Energy Certificate (OREC) solicitations.
- Added discretion for the PSC to evaluate ratepayer caps on offshore wind, to better reflect shifting market dynamics, inflation adjustments, and ratepayer cost pressures resulting from inadequate capacity supply.
- Enhanced flexibility for project transmission and interconnection with PJM or through coordinated state transmission plans.

In aggregate, these provisions will modernize Maryland's offshore wind policies and facilitate further investments necessary not only to achieve 100% clean energy, but also to keep the lights on and costs predictable in the face of growing demand. Without these important legislative actions, Maryland's emerging offshore wind supply chain faces greater uncertainty.

ENERGIZE Act ensures offshore wind is available to meet growing demand

Maryland's demand for electricity is rising at a time when capacity market supply is diminishing due to power plant retirements and Reliability-Must-Run arrangements. As a result, PJM has implanted changes to capacity market signals to promote more energy resources with high-capacity ratings. While PJM's rationale and implementation of these changes can be debated, they are already having an impact on Maryland. This will result in sharply rising consumer costs, underscoring the need for capacity market reforms and a greater electricity supply.

Maryland's legislature has long supported offshore wind as a clean replacement for older and inefficient power plants, and now the need for offshore wind is greater than ever. Offshore wind has a capacity factor around 50 percent, comparable to some fossil fuel power plants[1] (note: capacity factor is an average of how much electricity a power plant produces compared to maximum potential output over the course of a year). Offshore wind's high capacity factor reflects strong, steady winds offshore that produce during key reliability periods during the year, including cold winter months and at night. Looking across the range of options to deliver affordable, reliable and clean electrons to Maryland consumers—offshore wind ranks high and has a head start thanks to efforts over the last decade to establish critical supply chain investments. The addition of offshore wind will directly increase supply of capacity and suppress prices that consumers will be exposed to in the years to come.

ENERGIZE Act supports critical supply chain investments

Maryland is emerging as a supply chain leader in the U.S. thanks to the vision of Governor Moore and the General Assembly, and the boldness of the Public Service Commission. By approving US Wind's OREC reconfiguration, the state secured commitments to support the development of Sparrows Point Steel and Hellenic Cables; no other state has secured major supply chain investments on this scale. Now, the state should act to ensure its supply chain and manufacturing have a dependable market to sell into, maximizing local employment and economic development. The following outlines Maryland's growing influential role as a regional transmission and manufacturing hub:

[1] IEA, Offshore Wind Outlook 2019

- **The creation of a monopile facility in Sparrows Point and Hellenic Cables' cable facility automatically place Maryland in a leadership position**. Sparrows Point Steel (SPS) will be the first fully functional monopile facility in the US. The current site is 88 acres and includes one of the largest graving docks on the East Coast; however, there remains the option to lease an additional 24 acres from property owner Tradepoint Atlantic. Sparrows Point Steel expects to employ hundreds of full-time workers including those from United Steelworkers, with whom they've established a Memorandum of Understanding (MOU)[2].
- **US Wind has also signed an MOU with the Baltimore-DC Building & Construction Trades for construction of the wind farm, as well as to support logistics and port operations.** At full capacity, SPS will create 530 jobs and can produce approximately 100 monopiles, transition pieces, or turbine towers each year; however, industry demand cycles will have the plant operating at roughly 80% capacity[3].
- **US Wind is expected to enable $90 million of investment in Hellenic Cables' array cable facility at Wagner's Point, which will be the first of its kind in the nation.** The land at Wagner's Point will be developed in two phases, the first of which will be completed at the end of 2026. Phase One, with a budget of $200 million (including land acquisition costs), will see the construction of a land cables plant to address the need for transmission and distribution grid upgrades. Phase Two will expand the plant, adding the capability to manufacture subsea cables[4].
- **Hellenic Cables estimates that it will hire 200 tradespeople during construction and 120 manufacturing positions while the facility is operational, with an additional 250 indirect jobs being created as well**[5]. Both facilities will give Marylanders the opportunity to go to work on projects in Maryland and the entire country.

While the facilities are likely to sell their components to projects all along the East Coast, building a stable local market is the best policy measure to secure the future of the facilities. The ENERGIZE Act's procurement flexibility granted to the PSC and planned transmission development both act to support market development and a long-term order book for Maryland-based supply chain facilities. This is true beyond Sparrows Point Steel and Hellenic Cable – the 44 Maryland companies already working in offshore wind (having won 62 contracts) will be bolstered by a consistent local market development.

Amendments

Our organizations reiterate our support for the ENERGIZE Act, however we do request amendments that would foster parity for offshore wind with other proposed clean energy resources.

It is reasonable to consider all options for zero-carbon energy resources, and we acknowledge the steps this legislation takes to create a pathway to new nuclear power investments. It is

[2] United Steelworkers, USW, US Wind Announce Partnership to Transform Historic Sparrows Point Site
[3] US Wind, Sparrows Point Steel
[4] Cenergy Holdings, Final Investment Decision reached for a cables manufacturing facility in Maryland, USA
[5] Office of Governor Wes Moore, Governor Moore Announces Support for New Cable Manufacturing Facility in Baltimore

important that any clean energy policy implemented by this legislature reflect parity between energy sources. For example, reasonable ratepayer protections and conditions for state incentives should be aligned to not advantage one energy source over another. As introduced, this legislation implements or leaves in place several measures for offshore wind that would not apply to future nuclear power facilities. Specifically, we believe contract durations and federal incentive criteria should align for resources currently proposed in the ENERGIZE Act.

Closing thoughts

Although the need for offshore wind is clear, federal policy uncertainty is introducing new headwinds for the industry. In the face of federal policy instability and rising electricity demand, the ENERGIZE Act's offshore wind provisions signal Maryland's unwavering commitment to offshore wind and associated supply chain investments. This legislation is particularly critical this year, to ensure that the offshore wind developers and supply chain companies can continue to plan for investments needed by the end of the decade when PJM's forecasts show the energy demand crunch will materialize. We look forward to working with the legislation's sponsors to discuss potential amendments as this important legislation moves through the committee process.

Thank you for your consideration,

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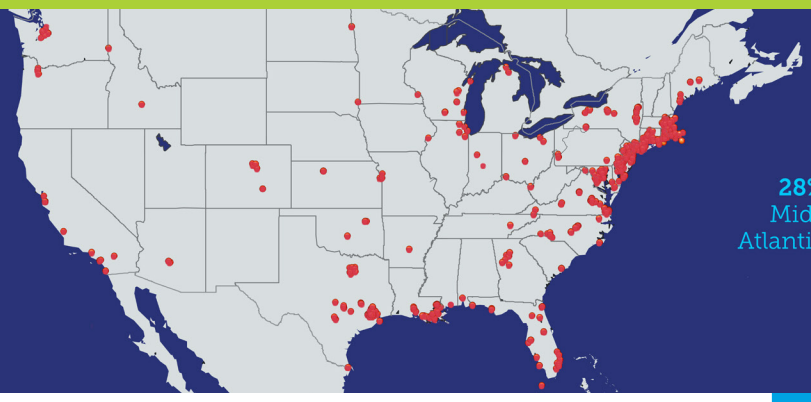
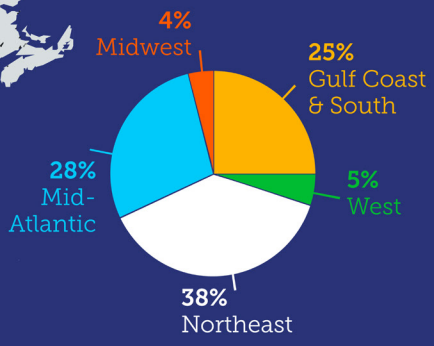
Maryland OSW Fact Sheet 1.pdf
Uploaded by: Evan Vaughan
Position: FWA

Offshore Energy is Working, and so is America

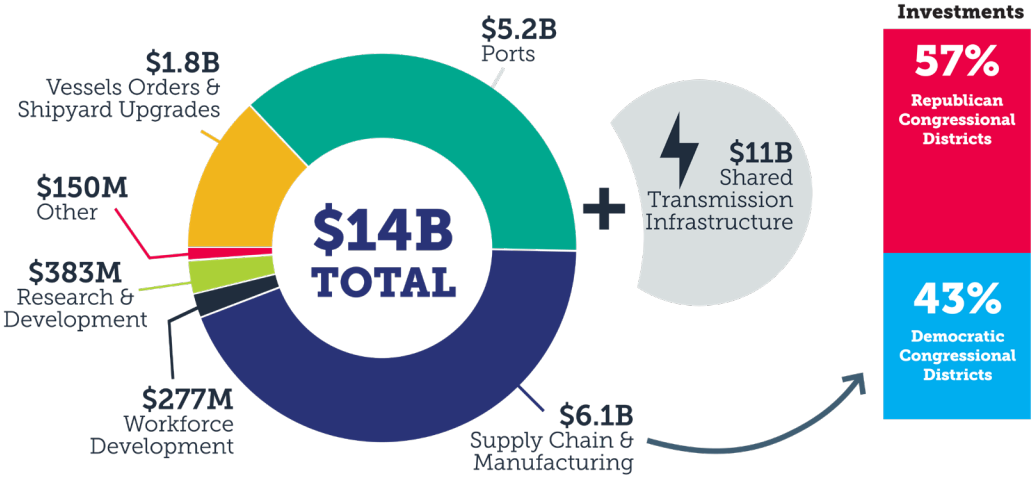
OCEANTIC NETWORK

Offshore Wind Supplier Contracts Across 40 States





$25B in American Investments



Supply Chain & Manufacturing Investments

57% Republican Congressional Districts

43% Democratic Congressional Districts

KIEWIT – First American-built offshore wind substation was constructed in **Corpus Christi, Texas** with support from **Kansas** workforce

NEXANS - $200 million **South Carolina** facility supplying cables to **New England** projects

EDISON CHOUEST - Building two new $100 million service vessels and new tug and barges in Gulf shipyards

NUCOR – $1.7 billion into **Brandenburg, Kentucky** steel mill for offshore wind grade steel

JSW STEEL – $600 million into **Mingo Junction, Ohio** and **Baytown, Texas** steel mills for offshore wind grade steel

LS GREENLINK –$681 million into HVDC cable facility in **Chesapeake, Virginia**

Rebuilding America's Fleet

- 33 Newbuild or Retrofitted Vessels Launched
- 25 More Ordered
- 22 Shipyards in 12 States, including **FL, LA, MS, PA, RI, TX, & WI**
- Featuring steel from **AL, IA, & WV**
- Components from **GA, IN, & OH**

Offshore Wind is Securing our Energy Future

- **6 Projects** in operation or installation delivering **5+ GW** of power, enough for **1.5 million homes**
- **116 GW** of state demand for offshore wind energy

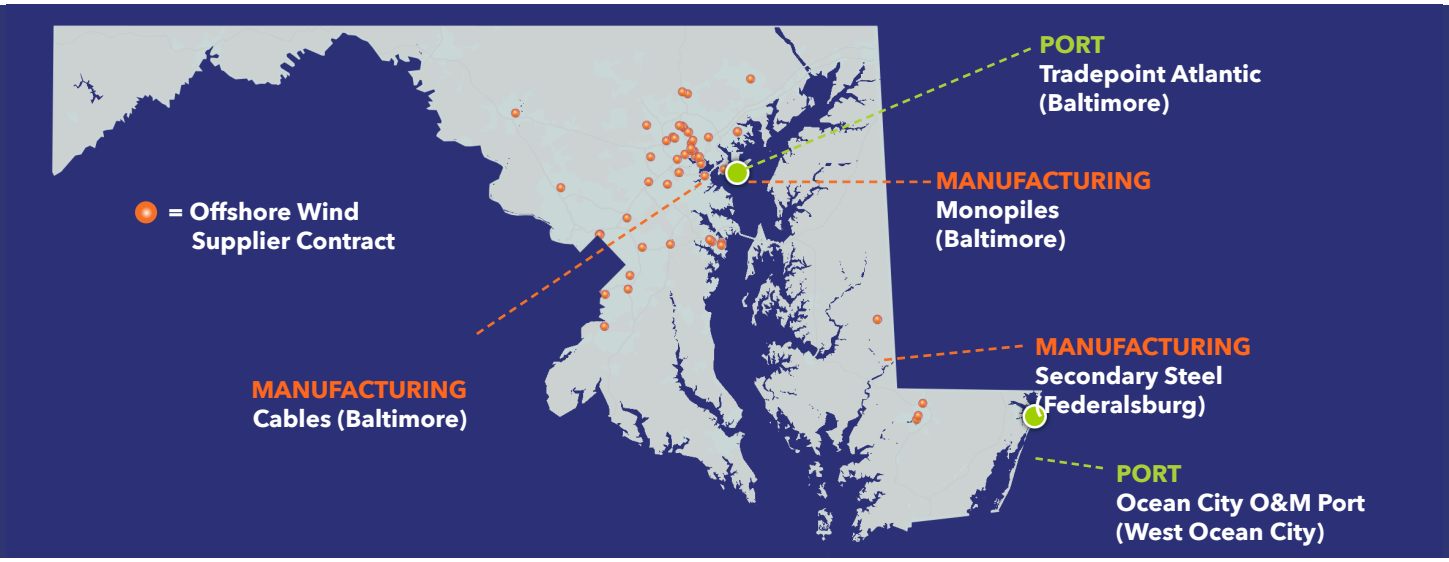
MARYLAND

OCEANTIC NETWORK

3 COMMERCIAL PROJECTS

1.7 GW IN DEVELOPMENT

8.5 GW STATE GOALS

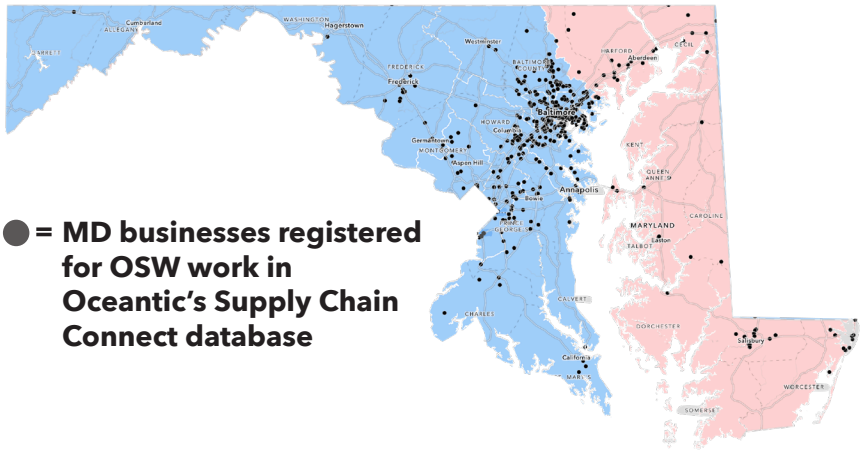


50 MARYLAND COMPANIES WITH OFFSHORE WIND CONTRACTS

- **Crystal Steel Fabricators** manufactured secondary steel for Ørsted, receiving a $5 million investment to improve high-quality welding capability
- **Estime Enterprises** (an XBE company) is the primary PPE supplier for DEME in the U.S.
- **John S. Connor** provided import customs brokerage and compliance consulting for Ørsted

$815 MILLION INVESTMENTS

- $300 million to Sparrows Point Steel for foundation manufacturing
- $90 million Tradepoint Atlantic port redevelopment
- $300 million into Baltimore for Hellenic Cables high voltage cable manufacturing
- $25 million in public funding to develop the Maryland skilled-trade workforce
- $11 million industry funding to University of Maryland for Environmental Science research



3,854 American Businesses Ready to Work in Offshore Wind

482 Maryland Businesses Ready to Work in Offshore Wind

SB0434_ FAV WAMEND_PSC.pdf
Uploaded by: Frederick Hoover
Position: FWA

STATE OF MARYLAND

PUBLIC SERVICE COMMISSION

Chair Brian Feldman
Education, Energy and the Environment Committee
2 West, Miller Senate Office Building
Annapolis, MD 21401

RE: SB 434 – Favorable with Amendments - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Dear Chair Feldman and Committee Members:

The Public Service Commission (the Commission) requests a favorable report for SB 316 with the amendments detailed in this testimony.

The proposed legislation redesignates the renewable portfolio standard ("RPS") to the clean energy standard ("CES") subject to certain modifications to alternative compliance payments and establishes a process to count nuclear within the new standard. The CES also establishes a goal for the deployment of 3000 additional MWs of clean energy subject to certain goals. Additionally, the proposed legislation makes certain modifications to the offshore wind procurement statutes that could impact future procurements. Finally, SB434 establishes a procurement process that the Commission must conduct at least three times, which is like previous offshore wind procurement in terms of process and contracts. This legislation has the potential to lead to meaningful deployment of generation resources that align with the State's clean energy goals while also securing additional capacity to assist with meeting Maryland's energy needs.

SB434 further modifies the Commission's roles with respect to clean energy development in the State by requiring the Commission to procure nuclear generation resources in lieu of leaving the entire transaction to the third-party developers. To achieve this, the Commission will need additional staff and consultants as explained in our fiscal note. The Commission notes that some of the expected timelines may be ambitious and thus there will need to be flexibility afforded to the Commission and developers on both the review and development of projects. The Commission also notes that the proposed legislation does not address generation siting issues that exist within the State for clean energy resources and these siting issues will remain. The General Assembly should be cognizant that the location of energy facilities within the State will raise location specific sitting concerns. Historically, the siting of any energy facility has the potential to be a publicly contentious proceeding. The Commission suggests as a possible amendment to clarify that granting of a contract does not guarantee approval of a certificate of public necessity and convenience by the Commission.

The Commission also notes that there may be some upward price pressure on customers' bills from the revised solar alternative compliance payments and incentivized nuclear, but these may be negated

depending upon how any new generation interacts with the electricity power markets. There is also some financial risk when entering into any long-term agreements with third party merchant generators.

Clean Energy Standard
§ 7-703(b) adds 22.5% to each year's RPS requirements, which comes from existing nuclear power. Specifically, § 7-703(g)(1) calls for reducing the revised CES requirements of § 7-703(b) by a percentage equal to last year's nuclear generation divided by last year's retail sales. The Commission requests that § 7-703(g)(1) be revised to more clearly give suppliers notification before a compliance year begins what their obligation will be after removing nuclear generation. This can be done by using two years of historical nuclear generation that is typically used continuously and to start the process for compliance year 2026 instead of requiring a backdating.

§ 7–704(a)(2) replaces the phrase "electric distribution **grid** serving Maryland" with "electric distribution **system** serving Maryland". Accordingly, solar, geothermal, poultry litter, waste–to–energy, and refuse–derived fuel are now required to be connected to the distribution **system**. However, the new § 7–701(d)(3) states that nuclear energy is connected with the electric distribution **grid.** It is unclear why nuclear is connected in a different manner than solar or waste-to-energy. Finally, note that § 7–1205(a)(1) requires that nuclear generation be connected to the electric distribution system serving the state. The legislation should be revised to have a consistent description of how generating stations using the various fuels are connected to the electric distribution grid/system serving Maryland.

§ 7–705(b)(2)(i)(2) eliminates the decline in solar compliance fees after 2024 and keeps the rate at $60 per MWh in perpetuity. It may be difficult for the Commission to establish tracking mechanisms to differentiate compliance by different REC types. The legislature should consider if there are ways to incentivize new solar without increased funding to solar that has already been developed.

Offshore Wind
§ 7–704.1(c)(6)(iii) adds a requirement that an offshore wind applicant: deposit into an escrow account an amount determined by the Commission, not less than $5,000 per megawatt of nameplate capacity, to dissuade withdrawal from the OREC process; and abide by a withdrawal process established by the Commission, including forfeiture of any deposit required by the Commission. Other edits are made to § 7–704.1 which also impact offshore wind procurement. Currently there is no clarification in the statue that these edits only apply to future procurements. This potentially becomes problematic when read with uncodified Section 7 which specifies that the bill is to be applied retroactively. This could result in unintended consequences to the offshore wind program. It is recommended that all edits to § 7–704.1 only apply on a prospective basis.

Nuclear Procurement
§ 7-1201(b)(1)(i) requires that the Commission open an application period where other interested persons may submit applications after the Commission receives the first application. Subsection (II) also requires that the Commission provide notice that the Commission is accepting nuclear energy generating station applications. § 7-1202 gives the Commission one year after the close of the application period to approve, conditionally approve, or deny an application, unless all parties agree to extend this requirement. As currently drafted, this provision allows a single party to veto an extension. This provision could cause an extension to not be approved. The bill should be modified to allow the Commission to extend its review of applications for good cause.

The Public Service Commission appreciates the opportunity to provide testimony for your consideration for bill SB 434. We request a favorable report with support for the amendments detailed above. Please contact Christina Ochoa, Director of Legislative Affairs at christina.ochoa1@maryland.gov if you have any questions.

Sincerely,

Frederick H. Hoover, Chair
Maryland Public Service Commission

Testimony for ENERGIZE Act.pdf
Uploaded by: Jamie DeMarco
Position: FWA

Favorable With Amendments Testimony for

Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

SB0434
Education, Energy, and Environment Committee
2/20/2025

Jamie DeMarco
Chesapeake Climate Action Network Action Fund
Lobbyist

On behalf of the Chesapeake Climate Action Network Action Fund, I urge a favorable amendments report on SB0434. The ENERGIZE Act will expand Maryland's ability to procure offshore wind which will bring additional union jobs to Maryland and reduce pollution. Offshore wind is key to Maryland's clean energy future. Once Maryland has 8.5 gigawatts of offshore wind spinning in the Atlantic those turbines will provide more electricity than all the coal and gas plants today combined provide. This legislation represents a significant step forward in Maryland's ability to build the offshore wind we need.

The nuclear procurement included in ENERGIZE includes ratepayer protections. The Public Service Commission would establish a cost cap on and is directed to ensure that no cost overruns are passed onto ratepayers. Projects would only be approved if they come under the cost caps set by the PSC, and ratepayers would not have to spend a single dollar on nuclear projects unless and until those projects start selling electricity to the grid.

If new nuclear energy can be built affordably, it should be deployed as a firm source of zero emission electricity. If nuclear energy proves too costly or complicated to deploy in a cost competitive way then Marylanders should not be on the hook to pick up the tab for a failed attempt to construct a plant. The ENERGIZE Act effectively provides ratepayer protection.

Most importantly, the promise of building new nuclear power must not be used as an excuse to slow down on our deployment of wind, solar, and batteries, all technologies that are commercially available today at scale and more affordable than coal or gas. The ENERGIZE Act sets up the policy infrastructure to build new nuclear projects if they can compete on costs, while also furthering the state's investments in clean, renewable energy.

While we applaud the lifting of the Offshore Wind Renewable Energy Credit cap, doing so would increase utility rates for customers. That increase should be offset by other policies to protect ratepayers. For those reasons we support amending the ratepayer protections included in

Senator Brooks' and Delegate Charkoudian's Abundant Affordable Clean Energy Act into the ENERGIZE Act, specifically the provisions that create a ratepayer protection Escrow account to be filled with solar ACP payments and 75% of the revenue from the energy franchise tax revenue from datacenters.

CONTACT
Jamie DeMarco, Lobbyist
jamie@demarcoavocacy.com, **443-845-5601**

SB434_FWA_Form Energy.pdf
Uploaded by: Jason Houck
Position: FWA

Form energy

SB 434 - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Position: Favorable with Amendments

Hearing Date: February 20, 2025

Form Energy respectfully requests a Favorable With Amendments (FWA) report from the Senate Education, Energy and Environment Committee on SB 434 Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act.

The ENERGIZE Maryland Act would set a clean energy portfolio standard including new generation using novel zero-emission technologies and a precedent in the state for including energy storage as a component of a statewide Clean Energy Business Development Advisory Committee. We appreciate the intent of this legislation and respectfully request consideration of the innovative and multifaceted nature of the energy storage industry.

Form Energy is a U.S. energy storage technology and manufacturing company that is commercializing a new class of multi-day energy storage system to enable a clean and reliable electric grid. Form Energy's first commercial product is an iron air battery system that can cost-effectively store and discharge energy for up to 100 hours at its rated capacity. Unlike lithium-ion batteries, which can only cost-effectively provide grid-scale energy for a few hours at a time, iron-air batteries can deliver energy for multiple days at a time. Made from some of the safest, cheapest, and most abundant materials on the planet – low-cost iron, water, and air – our battery system provides a sustainable and safe solution to meeting the growing demand for grid security and resiliency. Form Energy has more than 13 GWh of announced projects under contract and development throughout the U.S., the first expected to be deployed in 2025, all of which will be manufactured at Form Factory 1 in West Virginia.

Form Energy's batteries operate on the principle of reversibly rusting iron, which was first invented in the 1960s. Form Energy's batteries, while discharging, use air bubbles to convert iron metal to rust; while charging, the application of an electrical current converts the rust back to iron and the battery releases oxygen. Form Energy's battery system is composed of modules that are grouped together with auxiliary systems in weatherized, factory-assembled enclosures the size of shipping containers. Hundreds of these enclosures make up a modular, megawatt-scale power block that can be sited anywhere and used in a variety of applications including on either the transmission or distribution side of the grid. In December 2024, Form Energy announced that its iron-air battery technology achieved a key benchmark for safety by completing UL9540A safety testing, demonstrating no potential for thermal runaway and no fire risk under extreme abuse conditions, underscoring the safety of iron-air battery systems.

Form Energy's technology pairs well with a variety of energy resources and other types of short and long duration energy storage to optimize energy system configurations and does not need to be co-located for its benefits to be achieved. With rising energy demand, extreme weather, grid outages and other prolonged stressors, technology capable of storing energy for multiple days will be critical to ensure grid reliability and lower electric system costs. Duration and reliability should be a strong component of any energy storage procurement program designed to meet the needs of today and tomorrow.

Due to the nature of this technology and the multi-day storage resource class being fundamentally different from other existing battery storage devices common today, we wish to request amendments to ensure that the work of the advisory committee being designed now recognizes that the energy storage industry is not a monolith.

Additionally, we respectfully recommend that the Energize Act goes one step further in setting a procurement that would support the development of long-duration and multi-day energy storage devices that would meet a number of needs: enabling the transition to a clean grid with diversified energy resources; bolstering grid reliability and resilience; improving system capabilities to withstand shocks and stressors; and promoting economic development and job creation in Maryland communities.

Below is a brief summary of the changes proposed:

1. Adding definitions for long and multi-day energy storage
2. A second energy storage seat to the Clean Energy Business Development Advisory Committee
3. A procurement program that supports the development of long and multi-day duration storage and recognizes the reliability value in low cost per megawatt- hour of storage capacity

Form Energy stands ready to be of service to Maryland during its transition to clean energy. For these reasons we humbly request a favorable with amendments report from the Education, Energy, and the Environment Committee.

Sincerely,

Sarah Jackson
Senior Policy Manager
Form Energy, Inc.
sjackson@formenergy.com

SB0434_MDSierraClub_fwa_20February2025.pdf
Uploaded by: Josh Tulkin
Position: FWA

SIERRA CLUB
MARYLAND CHAPTER

P.O. Box 278
Riverdale, MD 20738

Committee:	**Education, Energy, and the Environment**
Testimony on:	**SB 0434, Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act**
Position:	**Favorable with Amendments**
Hearing Date:	**February 20, 2025**

The Maryland Chapter urges a favorable with amendments report on SB 434, the ENERGIZE Act. The Chapter appreciates the intention behind SB 434 to increase carbon-free and clean energy sources in the state, while also having significant concerns about the focus on new nuclear energy deployment.

Maryland has established strong clean energy goals and a variety of policies to drive clean energy deployment, but current policy is not sufficient to put us on track to meet our goals. Creating a holistic strategy to growing clean energy in Maryland can improve reliability, provide affordable rates, and create economic growth for the state.

100% Clean Energy Goal

The Sierra Club shares the goal of achieving 100% renewable generation (what we produce in state), and supports the further codification of Governor Moore's commitment to reaching this goal by 2035 through the declaration at the beginning of SB 434. Clean energy deployment is critical for achieving Maryland's climate goals – including a 60% reduction in greenhouse gases by 2031 and a 100% reduction by 2045 – but Maryland is falling behind. Maryland should continue to employ a variety of strategies to accelerate clean energy deployment to meet its energy needs and clean energy and climate goals.

Solar Energy

Solar energy is an essential component of Maryland's strategy in transitioning the state to clean renewable energy. Accordingly, through the Clean Energy Jobs Act (2019), Maryland set the statutory target of achieving 14.5% of the state's electricity consumption from solar generation by 2030, and has reaffirmed its commitment through the 2023 Climate Pollution Reduction Plan. Unfortunately, Maryland is falling far short of achieving its annual solar energy targets.

There are a variety of factors hindering the rate of solar growth, including the PJM queue, the SREC/ACP value, and local zoning. It is clear that our financial incentive structure and regulatory framework must be adjusted to accelerate solar deployment. The Chapter supports legislative opportunities to better incentivize increased deployment of solar in order to reach the state's goals and help address the climate crisis, and appreciate that SB 434 seeks to find a solution to address this challenge.

The legislatively set Alternative Compliance Payment (ACP) currently functions to create a ceiling for the value of the Solar Renewable Energy Credit (SREC). At the set price, a utility will pay an ACP instead of procuring solar energy and the associated SREC. Maryland already has a low SREC value compared to surrounding states, and current law would have the SREC value decrease in the coming years.

SB 434 would freeze the price of the ACP at the 2024 level, which is 6 cents per each kilowatt–hour of shortfall. Freezing ACPs is the minimum first step needed to rightsize incentives and support solar deployment in Maryland. However, it is important to note that the current ACP has not proven sufficient to deploy the necessary level of solar to meet our solar energy targets.

The Sierra Club believes a new approach is needed to provide adequate incentives to support further solar deployment in Maryland. The Committee should seriously consider additional actions to meet the goals, including adopting the Solar Renewable Energy Credit II (SREC-II) model proposed in SB 316, the Abundant Affordable Clean Energy (AACE) Act.

Offshore Wind Energy

Maryland has set an ambitious target of 8.5 GW of local offshore wind (OSW) development by 2031 through the Clean Energy Jobs Act and POWER Act. OSW has potential to meet a significant share of Maryland's energy demand, provide good-paying jobs to Marylanders, and support public health by displacing dirty, polluting sources of energy.

To achieve its offshore wind goals, Maryland should use a combination of market incentives and power purchase agreements to develop the market for OSW projects off the coast of Maryland. Maryland utilizes a creative financial tool called an offshore renewable energy credit (OREC) to incentivize OSW. SB 434 removes the existing OREC cap, instead allowing the PSC to set an appropriate cap. This will provide the PSC with the flexibility to weigh all of the costs and benefits of the project. For example, an offshore wind project might require new transmission which also brings a financial benefit to the grid overall. The PSC should employ a rigorous process to protect ratepayers from high prices.

Nuclear Energy

SB 434 renames the "renewable energy portfolio standard" to be the "clean energy portfolio standard" and defines nuclear energy as a clean energy resource under the new standard. It also alters the minimum required percentage of energy that must be derived from clean energy sources, adjusting the current RPS targets.

SB 434 also establishes a process for the PSC to review and approve an application for new nuclear energy generation projects, and to set a "long term pricing schedule" by which Maryland ratepayers would be subsidizing these projects.

Sierra Club is neutral on adjusting the current RPS target to recognize existing nuclear – Calvert Cliffs reactors – as a current carbon-free energy source in Maryland, if it truly is just functioning as an accounting tool. While the Club recognizes the continued need at this time to operate the

Calvert Cliffs reactors, as discussed in our testimony on the AACE Act (SB 316), we oppose the State incentivizing and facilitating *new* nuclear energy as an energy source.

New nuclear development is expensive and would increase financial risks to Maryland consumers. Nuclear power is two to six times more costly per megawatt-hour than wind and utility-scale solar, and new nuclear plants can take twice as long to come online.[1]

There are many recent examples of attempted nuclear deployment around the country that highlight the expense and delays. For example, the Vogtle nuclear project in Georgia started in 2009 with a predicted cost of $14 billion. When the final unit started operation in 2024, 16 years later, it had a price tag of more than $35 billion.[2] In another recent example, NuScale's small modular reactor project for a small municipal utility in Utah and Idaho saw costs balloon from $4.2 billion in 2018 to $9.3 billion in 2023, before being canceled.[3]

Amendments to Support Renewable Energy Solutions

The General Assembly has many opportunities this session to pass legislation that supports the deployment of solar, wind, battery storage, and energy efficiency – energy solutions that are ready, affordable, and effective today and can be implemented more quickly to address Maryland's energy needs.

In addition to the SREC-II model from SB 316, the Committee should strongly consider other amendments to include components of that bill. The Sierra Club would especially like to see the addition of SB 316's provisions on battery storage procurement and OSW transmission, combined with ratepayer protections and labor standards.

The Sierra Club applauds the efforts to continue to move Maryland towards reaching its existing renewable energy goals and increased deployment of clean energy in the state. The ENERGIZE Act, SB 434, represents one component of this effort. We recommend a favorable with amendments report on the ENERGIZE Act, removing the provisions about new nuclear deployment and adding amendments on OSW transmission and additional incentives for battery storage and solar deployment, as included in SB 316.

Mariah Shriner
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[1] Lazard, "Levelized Cost of Energy: Version 16.0." 2023. https://www.lazard.com/research-insights/2023-levelized-cost-of-energyplus/
[2] Bright, Zach, "After Vogtle, what's next for nuclear?" April 30, 2024, E&E News, https://www.eenews.net/articles/after-vogtle-whats-next-for-nuclear/
[3] Ramana, M.V., "The collapse of NuScale's project should spell the end for small modular nuclear reactors," Utility Dive, Jan 31, 2024. https://www.utilitydive.com/news/nuscale-uamps-project-small-modular-reactor-ramanasmr-/705717/

SB0434 (HB0505) - FWA - Empowering New Energy Reso

Uploaded by: Landon Fahrig

Position: FWA

Maryland Energy Administration

TO: Chair , Vice Chair , and Members of the Committee
FROM: MEA
SUBJECT: SB 434 - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act
DATE: February 20, 2025

MEA Position: FAVORABLE WITH AMENDMENTS

The ENERGIZE Act is the next step in Maryland's trajectory to becoming more energy independent and a leader in the clean energy economy. A Clean Energy Portfolio Standard is necessary in making Maryland a leader in clean energy and the greenest state in the country. The bill is a pro-labor, pro-business development measure that establishes a clean energy standard by building on the existing Renewable Portfolio Standard (RPS), includes solar and offshore wind reforms, and adds nuclear energy towards the aim of the state reaching a 100% clean electricity goal.

In June of 2024, Governor Moore signed an executive order to advance Maryland's Climate Pollution Reduction Plan. The Order required the Maryland Energy Administration (MEA) to develop a framework for 100% clean energy. ENERGIZE is the result of that development.

Adding nuclear energy to the state's clean energy goals will give credit for the carbon-free generation that is already taking place in the state, and prompt the development of an emerging technology, small modular reactors (SMRs), necessary to achieve the state's clean electricity goals. The bill establishes a nuclear energy procurement mechanism that mirrors the state's existing procurement process for offshore wind. This is a key step in overcoming the high economic hurdles needed to promote investment in new carbon-free technologies.

For solar, the bill would freeze the existing statutory alternative compliance payment (ACP) level, stabilizing the market for solar renewable energy credits (SRECs). The ACP functions essentially as a cap on SREC prices, and Maryland's SRECs simply do not carry enough value to spur more development in the State. This is especially true in future years, where ACP will decline to $22.50. Competing, regional neighbor jurisdictions have SRECs that are valued at significantly higher prices and typically have higher price caps. In order to see the future development of solar in the state, Maryland must provide market stability to help continue to spur investment in solar development.

The bill also reforms the current offshore wind processes. Currently, the rate caps on offshore wind are statutory, meaning that any project bidding into the offshore wind renewable energy credit (OREC) process already knows the upper limit attached to a solicitation. A more favorable approach for the State is to have a reference price or upper limit set by the PSC during a solicitation, and not

disclosed publicly. This will prevent entities bidding into the OREC process from intentionally maximizing ratepayer costs according to the statutory cap. Additionally, the bill relaxes the interconnection requirements for offshore wind, permitting greater flexibility in the interconnection of these vital projects. Finally, ENERGIZE would require a modest security investment from offshore wind developers as a means to cover any administrative costs should a developer choose to remove themselves and their projects from the OREC process, as this has previously occurred in Maryland.

Lastly, the bill will help drive investment within the state, much in the way that offshore wind has helped to reignite industries related to offshore wind development. ENERGIZE creates a labor-friendly environment within its nuclear procurement mechanism, and repurposes the Maryland Offshore Wind Business Development Fund to be the Clean Energy Business Development Fund. This broadens the scope of that fund so that investments can be made in business development for all types of clean energy technologies, including SMRs.

ENERGIZE is a focused, logical next step in making Maryland the cleanest state in the country. With these measures in place, Maryland can leap forward in its pursuit of clean electricity and energy independence. For these reasons, MEA urges the committee to adopt the amendments being proposed by the Governor's Legislative Office and to issue a **favorable report as amended**.

Our sincere thanks for your consideration of this testimony. For questions or additional information, please contact Landon Fahrig, Legislative Liaison, directly (landon.fahrig@maryland.gov, 410.931.1537).

SB434 ENERGIZE Act SEIA Testimony.pdf
Uploaded by: Leah Meredith
Position: FWA

February 20, 2025

Senator Brian Feldman
Chair
Education, Energy, Environment Committee
2 West Miller Senate Office Building
11 Bladen Street
Annapolis, MD 21401

Senator Cheryl Kagan
Vice Chair
Education, Energy, Environment Committee
2 West Miller Senate Office Building
11 Bladen Street
Annapolis, MD 21401

SEIA Favorable with Amendments on SB434: Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Chair Feldman, Vice Chair Kagan, and Members of the Senate Education, Energy, and Environment Committee:

I am writing on behalf of the Solar Energy Industries Association (SEIA) regarding our position of **Favorable with Amendments** on SB434 (Senate President Ferguson by Request of the Administration), also known as the Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act. It was referred to the Senate Education, Energy, and Environment Committee on January 21, 2025.

Founded in 1974, SEIA is the national trade association for the solar and storage industries, building a comprehensive vision for the advancement of these technologies. SEIA is leading the transformation to a clean energy economy by supporting policy measures that will drive the needed investment in clean, domestic, local job-producing solar generation. We work with our 1,200+ member companies, which include solar manufacturers, service providers, residential, community and utility-scale solar developers, installers, construction firms, and investment firms, as well as other strategic partners, to shape fair market rules that promote competition and the growth of reliable, low-cost solar power. Maryland is home to more than 200 solar businesses with many more national firms also conducting business in the state.

Maryland's Evolving Energy Landscape

After a history of flat, or even declining, electricity consumption, the United States' power grid is currently experiencing the largest demand growth in eighty years, due to new manufacturing facilities as well as cutting-edge American innovations in artificial intelligence, data centers, and cryptocurrency mining. Unfortunately, this increase in electricity demand is occurring faster than new generation is being brought online and as a result, Maryland now faces significant increases in energy costs after decades of relatively stable electricity costs.[1] The mismatch in electricity supply and forecasted demand is in large part attributable to years of policy decisions and inactions at PJM, the regional transmission organization and

[1] Office of People's Counsel. "Bill and Rate Impacts of PJM's 2025/2026 Capacity Market Results & Reliability Must-Run Units in Maryland." August 2024. https://opc.maryland.gov/LinkClick.aspx?fileticket=keJs-QqaLr0%3D&tabid=63&portalid=0&mid=1480

independent system operator that manages the electric transmission grid for thirteen states and the District of Columbia, including Maryland. The recent 2025/2026 PJM capacity auction saw an 800% price increase from previous years, which will be passed on to Maryland ratepayers as a portion of their utility bills sooner than new sources of generation can be brought online to meet the forecasted increases in energy demand. SB434 recognizes that meeting Maryland's energy needs will require the rapid deployment of a diverse energy strategy, and the bill takes a number of proactive steps to ensure new sources of generation are brought online in the state in order to prevent continuing dramatic increases in energy costs.

Solar and energy storage are among the only energy resources primed to cost effectively address Maryland's near-term energy challenges. In 2023, solar made up the majority of additions to the U.S. electric grid, accounting for 55% of all new generation capacity, due, in part, to the 37% decrease in the price of solar photovoltaics over the last decade.[2] Utility scale solar, along with onshore wind, continue to be the cheapest sources of new electricity generation in the United States, beating out the cost of coal and fossil gas-fired generation.[3] While acknowledging the important role solar and energy storage assets play in meeting Maryland's near-term resource adequacy needs, SB434, as currently drafted, relies on the existing framework of Maryland's Renewable Energy Portfolio Standard (RPS), which is no longer the right policy for cost-effectively encouraging new in-state solar generation.

Maryland's Broken RPS

When the RPS was first enacted twenty years ago, the newly created renewable energy credits (RECs) were a powerful tool in jumpstarting renewable energy generation in the state. RECs are a market-based instrument that represent the social and other non-power attributes of renewable electricity generation. RECs are issued when 1 megawatt-hour (MWh) of electricity is generated from a renewable energy resource and are acquired by the electric load serving entities (utilities and retail energy suppliers) to show compliance with the RPS. Maryland's RPS also established a carveout for meeting solar-specific targets, thus creating the Solar Renewable Energy Credit (SREC) market. To comply with the RPS, electricity suppliers must acquire RECs derived from Maryland-certified Tier 1 and Tier 2 renewable sources, with the state's 14.5% solar carveout being a subset of Tier 1. Not meeting the necessary RPS requirements obliges Maryland's electric load serving entities to pay an alternate compliance payment (ACP) penalty. In recent years, electricity suppliers have elected to pay ACP penalties due to their inability to purchase RECs at prices lower than the ACP, with the $300 million paid in ACPs in 2023 being the largest in the history of Maryland's RPS.[4] SB434 attempts to address this shortcoming in the RPS by freezing Maryland's solar ACP

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[2] Wood Mackenzie Power & Renewables and Solar Energy Industries Association. U.S. Solar Market Insights Report. December 2024.
[3] Lazard. Levelized Cost of Energy+. June 2024. https://www.lazard.com/research-insights/levelized-cost-of-energyplus/.
[4] Public Service Commission of Maryland. "Renewable Energy Portfolio Standard Report with Data for Calendar Year 2023." December 2024. https://www.psc.state.md.us/wp-content/uploads/Corrected-CY23-RPS-Annual-Report_FNL_V2.pdf

at 2024 levels, $60 per MWh. See the table below for Maryland's current ACP schedule under the existing RPS.

Maryland's Current ACP Schedule ($/MWh)

Compliance Year	Solar ACP	Tier 1 ACP (Excluding Carve-outs)
2023	$60	$30
2024	$60	$27.50
2025	$55	$25
2026	$45	$24.75
2027	$35	$24.50
2028	$32.50	$22.50
2029	$25	$22.50
2030	$22.50	$22.35

Freezing Maryland's solar ACP at 2024 levels is neither a cost-effective way to target new in-state solar generation nor does it address Maryland's foundational RPS market issues. While increasing the solar ACP will support solar generation in the short term, it is an expensive way to target new generation. While freezing Maryland's solar ACP is a simple policy lever aimed at supporting new solar generation, it also provides unnecessarily financial support to existing legacy solar projects since solar developers would have already made investment decisions based on the then-current ACP stream in order to receive their above-risk-free returns. Further analysis is needed to determine whether freezing the solar ACP at $60 is the correct level that will spur new solar development, particularly if there are rollbacks or restrictions on the federal investment tax credits (ITC). If it is not the correct market signal, ACP payments will continue to be the mechanism by which electricity suppliers comply with Maryland's RPS obligations, thus continuing to funnel Maryland ratepayer dollars away from directly investing in new renewable energy generation and towards ACP penalties, which are deposited into the Maryland Strategic Energy Investment Fund. SEIA recommends amending SB434 to contain elements of SB316 (Brooks), also known as the Abundant Affordable Clean Energy (AACE) Act, in order to address the current cost and administrative inefficiencies of Maryland's RPS.

Recommended Amendments

By merely freezing the solar ACP at 2024 levels, SB434 does not contain meaningful protections for Maryland's ratepayers. The AACE Act, on the other hand, includes several pathways to ensure that Maryland ratepayers are protected from rising electric utility bills. It directs the Maryland Energy Administration to supervise an escrow account that will be created to direct ACP funds from electricity costs back to ratepayers. ACPs from the legacy RPS/REC system will be directed to this escrow account rather than the Strategic Energy Investment Fund, returning the ACP pass-through costs to ratepayers. Similarly, AACE directs 75% of total franchise, sale, and use taxes from qualifying data centers, which are

major drivers of increased electric demand that in turn increase ratepayer utility bills, to be contributed to this escrow account.

SB434 should be amended to establish a methodology for right-sizing incentives for new solar energy projects, rather than maintaining the "one-size fits all" approach as currently exists in Maryland's SREC market. SEIA contends that the AACE Act provides a superior framework for linking in-state electric consumption with in-state electricity generation. The AACE Act acknowledges the needs of the different solar market segments and project types by ensuring individual projects can receive the incentives they need to come online, while ensuring unneeded incentives are not passed through to ratepayers via ACP penalties. The AACE Act provisions allow for project flexibility and targeted incentives to spur solar development, ensuring that energy projects will directly benefit the state's energy requirements and directly benefit ratepayers.

Under AACE, utility-scale projects will be issued a guaranteed fixed price contract by the Maryland PSC, subject to competitive procurement bids including cost-benefit analyses, other criteria such as brownfield siting, and a requirement that projects directly serve Maryland load. This process minimizes cost to ratepayers while ensuring the project is economically viable. The procurement also includes labor protections and community benefit agreements. SREC-II and REC-IIs are subsequently issued to these projects, which will operate to make up the difference between the fixed price issued by the PSC and market price sales for electricity to ensure project viability. This approach to utility-scale incentive-setting has been successful in other states, including Massachusetts, New Jersey, and Illinois. AACE's language builds on these proven successes.

SEIA also recommends amending SB434 to incorporate language from the AACE Act that would subject distribution scale solar to an Administratively Determined Incentive (ADI) set by the PSC. ADIs are set for projects within given capacity blocks – groupings of market sectors – to ensure broad growth of distributed generation across the state. Through setting the value of an ADI, the PSC can tailor the incentive amount a given project receives for each of the identified market sectors, allowing for a balancing between the amount of incentives required to promote market growth across the sectors, without overly burdening ratepayers with incentive costs that exceed economic requirements for development. As is the case with competitive procurement for utility scale projects, the ADI model has been successful in other states to ensure ratepayer protection alongside promoting renewable generation construction to meet the state's load.

Finally, SEIA recommends incorporating the AACE Act's competitive procurement process in 2026 and 2027 for up to 1,600 MW of in-state battery storage projects, which would help ensure that storage assets become operational *in this decade* and start generating energy cost-savings to Marylanders. These projects will be constructed in Maryland and serve Maryland's peak demand – alleviating the need for comparatively more expensive "peaker" plants. These projects are also eligible to bid into the PJM capacity market which can, in part, alleviate soaring capacity market costs. AACE's competitive storage procurement process includes significant cost-benefit analyses as a part of any project application to ensure the lowest cost to

ratepayers, as well as a CPCN-equivalent to ensure rapid deployment upon approval by the PSC. This procurement process includes significant labor protections, including the requirement for community benefit agreements, which include guarantees for hiring practices and wage provisions to ensure Maryland's workforce benefits from these projects. AACE also creates a pathway for the deployment of 150 MW of new in-state distribution-connected energy storage assets, not subject to the delays of the PJM interconnection queue.

SEIA recommends amending SB434 to more closely mirror the solar and energy storage provisions of the AACE Act to place Maryland on a path that allows for the flexibility to respond to future energy demands and provides near-term solutions to Maryland's resource adequacy challenges. While higher electricity costs are already on the horizon, the cost of policy inaction and failing to bring new sources of electricity online in Maryland is far greater. SEIA thus looks forward to working with members of the Administration, Senate leadership, members of this committee, as well as other stakeholders, to chart a pathway for cost effectively responding to Maryland's future energy demands while providing near-term solutions to the state's resource adequacy challenges. Should you have any questions, please do not hesitate to contact me.

Sincerely,

Leah Meredith

Leah Meredith
Mid-Atlantic Regional Director
Solar Energy Industries Association
lmeredith@seia.org

ENERGIZE Testimony (SB474_HB505).pdf
Uploaded by: Maurice Simpson, Jr.
Position: FWA

Constellation

February 20, 2025

Chairman Brian Feldman
Senate Education, Energy, and the Environment Committee
2 West Miller Senate Office Building
Annapolis, Maryland 21401

RE: Empowering New Energy Resources and Green Initiatives Toward a Zero–Emission (ENERGIZE) Maryland Act (SB 434/HB 505)

Constellation is the nation's largest owner and operator of nuclear energy in the country, generating more clean and reliable energy than any other company in the U.S. Headquartered in Baltimore, Maryland, Constellation is a leading participant in efforts around the country to promote and grow new nuclear development and is greatly encouraged by Maryland's focus on nuclear energy as the commonsense solution to secure the clean, reliable and affordable generation that Maryland and the rest of the U.S desperately needs. Constellation looks forward to continued coordination with Maryland to preserve the state's existing nuclear assets, and to construct a workable procurement structure to successfully achieve the development of new nuclear energy.

While Constellation supports the conceptual ideas in SB 434, including a policy that recognizes nuclear as a clean energy resource and a procurement mechanism to enable new nuclear units, amendments to SB 434 are needed for implementation of the bill to be successful.

The Clean Energy Portfolio Standard proposed in SB 434 correctly recognizes nuclear as a clean energy resource. However, the compliance mechanism imbedded in the bill does not value the clean attributes of a nuclear generating station comparable to Tier 1 and Tier 2 renewable sources. This aspect of the Clean Energy Portfolio Standard needs to be corrected in order for that program to workable. Nuclear provides a significant portion of the state's clean energy and must be recognized and compensated for the value it provides to the state in cleaning up the generation stack.

SB 434 also would establish a nuclear procurement mechanism to incentivize a build out of new nuclear. The procurement mechanism in SB 434 appears to be mirrored after the Offshore Wind Procurement structure (the OREC Structure) that was passed by this legislature in 2013. Constellation has concerns with use of this structure for new nuclear development and does not believe it will result in a successful procurement.

The OREC Structure has not yet resulted in an operational project. Developers have backed out of contracts, citing financing concerns, supply chain issues and inflation. Similar issues will arise for new nuclear projects but will be more complicated given the need to secure permitting and licensing approvals for the underlying technology. This will result in a unique set of risks to be managed for multi-billion-dollar nuclear projects. The length of time required to bring a nuclear

project to fulfillment and the financing necessary to achieve commercial operations will not work in a construct like the one included in SB 434, where costs cannot be collected until the project is operational and cost recovery for costs exceeding initial budgets is expressly prohibited. The procurement mechanism contemplated in SB 434 needs to be adjusted to account for these risks as well as reflect the commercial and regulatory realities faced by potential developers.

Constellation appreciates the dialogue that has occurred with the Administration regarding SB 434, however, respectfully requests that the bill be amended to address the foregoing concerns.

Sincerely,

Maurice Simpson, Jr.

Maurice Simpson, Jr.
Senior Manager, State Government and Regulatory Affairs
maurice.simpson@constellation.com

SB 434 Empowering New Energy Resources and Green I

Uploaded by: Michelle Dietz

Position: FWA

The Nature Conservancy
Protecting nature. Preserving life.

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Thursday, February 20, 2025

TO: Brian Feldman, Chair Education, Energy, and the Environment Committee; and Committee Members
FROM: Humna Sharif, The Nature Conservancy, Climate Adaptation Manager; and Michelle Dietz, The Nature Conservancy, Director of Government Relations
POSITION: Support SB 434 Empowering New Energy Resources and Green Initiatives Toward a Zero–Emission (ENERGIZE) Maryland Act

The Nature Conservancy (TNC) supports with amendments SB 434 offered by the Administration and Senators Brooks, Ellis, and Watson. TNC appreciates Governor Moore and the Administration's ongoing leadership in setting a 100% clean energy standard for Maryland. Clean energy can be produced cheaper and safer than non-renewable energy generation methods. The ENERGIZE Act would reduce fossil fuel generating sources' adverse health and climate impacts and promote clen energy development in Maryland.

SB 434 renames the Renewable Energy Portfolio Standard as the Clean Energy Portfolio Standard; this includes Tier 1 and Tier 2 renewable sources as well as nuclear energy generating facilities and small modular reactors. The bill also sets a statewide goal in achieving 100% clean electricity. We know that the existing renewable energy portfolio and current offshore wind leases will not satisfy our state's clean energy goals. SB 434 seeks to enable construction of at least 3000 MW of electricity from clean energy generation sources including a mix of solar, wind, geothermal, and nuclear. This bill aims to increase energy independence for our state. Incentives for clean energy deployment will also protect our state against fossil fuel prices' volatility.

SB 434 takes a phased approach for implementing clean energy projects and amends the clean energy portfolio to make up at least 60.5% of the state's energy mix in 2025. This number steadily increases annually to 75% by 2030, with energy being sourced from a mix of Tier 1 and Tier 2 sources. While the state has a goal of 100% clean energy, this bill only sets the pathway up to 75% clean energy. Though some uncertainty is to be expected in the energy mix for the state beyond 2030, **TNC recommends bill language reflecting a target date for achieving 100% clean energy.**

SB 434 sets nuclear energy procurement guidelines for new projects in place, including a 90-day minimum open application period for interested parties to submit proposals. This legislation requires nuclear project applicants to include a cost-benefit analysis with components such as anticipated environmental benefits, health benefits, and environmental impacts of the project on Maryland residents. Additional requirements are an impact analysis for residential, commercial, and industrial ratepayers over the life of the project and any long–term effect on energy and capacity markets as a result of the project.

TNC supports providing a path forward to address resource adequacy in Maryland to meet current and future electric load requirements and to alleviate the burden on ratepayers. **TNC recommends amendment language to include provisions from the Abundant Affordable Clean Energy (AACE) Act (SB 316/HB 398) within this legislation.** The AACE Act's proposed pathway brings on new energy projects that will serve Maryland's load requirements within this decade on a least-cost basis, while allowing flexibility to respond to potential shifts in future energy markets through rapid, low-cost, and flexible solutions.

The AACE Act is complimentary to SB 434 in many ways, though the AACE Act drafted a methodology to refresh and "right size" incentives for new renewable energy projects in the state. TNC would like to see these pieces reflected within SB 434, specifically concerning Maryland's historic REC and SREC incentives. These incentives have been a powerful tool to jumpstart renewable generation in the state, but the "one-size-fits-all" approach often results in incentives that are mismatched to specific projects' needs. **Within SB 434, TNC requests including the SREC-II and REC-II provisions of the AACE Act.** These provisions will ensure that individual clean energy

projects can receive the incentives they need to come online, while also preventing unneeded incentives from being passed through to ratepayers.

We urgently need more energy, but we also need that energy to be clean and readily available. **TNC requests that SB 434 be amended to maximize the inclusion of all clean energy pathways available to our state and include battery storage in the legislation.** Energy storage can be built faster to address our supply and demand challenges within a shorter time frame. In the last decade, solar photovoltaic costs have fallen by 90%, batteries' cost decreased by 90%, and onshore wind by 70%.

The Nature Conservancy thanks the Administration and Senators Brooks, Ellis, and Watson for introducing this legislation. Our intent in sharing these amendments within this testimony is to support Maryland's swift and secure transition to a fully clean energy future – as is the goal of SB 434. We look forward to continuing to work with leaders in the state to support implementing programs coming out of this legislation.

Therefore, we urge a favorable with amendments report on SB 434.

SB 434- Favorable with Amendments - The ENERGIZE A

Uploaded by: Rebecca Rehr

Position: FWA

MARYLAND LEAGUE OF CONSERVATION VOTERS

February 20, 2025

Favorable with Amendments - SB 434 - The ENERGIZE Act

Mr. Chair and Members of the Committee:

Maryland LCV would like to thank the Moore-Miller Administration for their leadership on climate and clean energy solutions and for bringing SB 434, the ENERGIZE Act, forward this year. The ENERGIZE Act follows a stepwise approach from the Moore-Miller Administration to implementing the Climate Solutions Now Act: releasing the Climate Pollution Reduction Plan, signing the Executive Order "Leadership by State Government: Implementing Maryland's Climate Pollution Reduction Plan," working with agencies on Climate Implementation Plans, and defending important regulations like the Building Energy Performance Standards.

The ENERGIZE Act sets a 100% clean electricity goal for the state, reorganizes the Renewable Energy Portfolio Standard as a Clean Energy Portfolio Standard to include nuclear energy in reaching state targets, creates a procurement process for new nuclear power, freezes solar Alternative Compliance Payments (ACPs), and changes two aspects of offshore wind in Maryland: removes the legislatively-set ratepayer cap and removes the requirement that projects interconnect in the Delmarva Peninsula. We support the Administration's amendment to add a reporting requirement on the state's progress towards achieving 100% clean electricity, including adding a date by which 100% clean electricity can reasonably be achieved.

Maryland LCV's position on SB434 is Favorable with Amendments. Maryland LCV's amendments are meant to:

1. Clarify some definitions within the nuclear portion of the bill, and
2. Add a storage component to the bill as a critical part of clean energy infrastructure.

Maryland LCV urges a favorable report on this important bill, with the consideration of the amendments offered below.

SUGGESTED AMENDMENTS to SB 434 - The ENERGIZE Act

SUGGESTED AMENDMENTS

AMENDMENT 1

On page 3, after line 24 insert:

7–216.

(a) (1) In this section the following words have the meanings indicated.

(2) (i) "Energy storage device" means a resource capable of absorbing electrical energy, storing it for a period of time, and delivering the energy for use at a later time as needed, regardless of where the resource is located on the electric [distribution] system.

(ii) "Energy storage device" includes all types of electric storage technologies, regardless of their size, storage medium, or operational purpose, including:

1. thermal storage;

2. electrochemical storage;

3. [virtual power plants] THERMO–MECHANICAL STORAGE; and

4. hydrogen–based storage.

(3) "Investor–owned electric company" means an electric company that is 24 not a municipal electric utility or an electric cooperative.

7–216.2.

(A) IN THIS SECTION, "ENERGY STORAGE DEVICE" HAS THE MEANING STATED IN § 7–216 OF THIS SUBTITLE.

(B) (1) THE GENERAL ASSEMBLY FINDS AND DECLARES THAT THE STATE HAS A GOAL OF REACHING 150 MEGAWATTS OF DISTRIBUTION–CONNECTED ENERGY STORAGE DEVICES.

(2) ON OR BEFORE JULY 1, 2025, AND ON OR BEFORE JULY 1, 2026, THE COMMISSION SHALL NOTIFY EACH ELECTRIC COMPANY OF ITS PROPORTION OF THE GOAL ESTABLISHED UNDER THIS SUBSECTION, BASED ON THE ELECTRIC COMPANY'S SERVICE LOAD.

(C) (1) ON OR BEFORE NOVEMBER 1, 2025, AND ON OR BEFORE NOVEMBER 1, 2026, THE COMMISSION SHALL REQUIRE EACH ELECTRIC COMPANY TO DEVELOP AND IMPLEMENT A PLAN TO ACHIEVE THE PROPORTION OF DISTRIBUTION–CONNECTED ENERGY STORAGE DEVICES NECESSARY TO REACH THE ELECTRIC COMPANY'S APPORTIONMENT OF THE GOAL STATED IN SUBSECTION (B) OF THIS SECTION.

(2) ON OR BEFORE MARCH 1, 2026, FOR PLANS SUBMITTED BY NOVEMBER 1, 2025, AND ON OR BEFORE MARCH 1, 2027, FOR PLANS SUBMITTED BY NOVEMBER 1, 2026, THE COMMISSION SHALL:

(I) EVALUATE EACH PLAN;

(II) ACCEPT PUBLIC COMMENTS ON EACH PLAN; AND

(III) ISSUE AN ORDER FOR EACH PLAN THAT EITHER:

1. APPROVES THE PLAN; OR

2. APPROVES THE PLAN WITH MODIFICATIONS THAT THE COMMISSION CONSIDERS NECESSARY.

(3) THE ENERGY STORAGE DEVICES CONSTRUCTED OR PROCURED UNDER EACH PLAN SHALL INCLUDE A COMBINATION OF DEVICES OWNED BY THE ELECTRIC COMPANY AND DEVICES OWNED BY A THIRD PARTY, WITH NOT MORE THAN 30% OF THE DEVICES BEING OWNED BY A THIRD PARTY.

(4) (I) THE ENERGY STORAGE DEVICES THAT ARE CONSTRUCTED OR PROCURED UNDER A PLAN SUBMITTED BY NOVEMBER 1, 2025, SHALL BE OPERATIONAL BY AUGUST 1, 2027.

(II) THE ENERGY STORAGE DEVICES THAT ARE CONSTRUCTED OR PROCURED UNDER A PLAN SUBMITTED BY NOVEMBER 1, 2026, SHALL BE OPERATIONAL BY AUGUST 1, 2028.

(III) THE COMMISSION MAY EXTEND A DEADLINE UNDER THIS PARAGRAPH FOR GOOD CAUSE.

(D) THE COMMISSION SHALL REQUIRE EACH PLAN TO DEMONSTRATE THAT THE CONSTRUCTION OR PROCUREMENT OF EACH ENERGY STORAGE DEVICE:

(1) IS BENEFICIAL IN TERMS OF COST, INCLUDING A DEMONSTRATION OF ANY:

(I) AVOIDED OR DELAYED TRANSMISSION, DISTRIBUTION, AND

GENERATION COSTS; AND

(II) AVOIDED EMISSIONS; AND

(2) CAN BE COMPLETED WITHIN 18 MONTHS AFTER THE PLAN IS APPROVED.

(E) (1) A DEVELOPER OF A THIRD–PARTY–OWNED ENERGY STORAGE DEVICE CONSTRUCTED IN ACCORDANCE WITH THIS SECTION SHALL ENSURE THAT WORKERS ARE PAID NOT LESS THAN THE PREVAILING WAGE RATE DETERMINED UNDER TITLE 17, SUBTITLE 2 OF THE STATE FINANCE AND PROCUREMENT ARTICLE.

(2) AN ENERGY STORAGE DEVICE CONSTRUCTED AND OWNED BY AN ELECTRIC COMPANY SHALL BE CONSTRUCTED BY:

(I) EMPLOYEES OF THE ELECTRIC COMPANY; OR

(II) CONTRACTORS THAT SHALL ENSURE THAT WORKERS CONSTRUCTING THE ENERGY STORAGE DEVICE ARE PAID NOT LESS THAN THE PREVAILING WAGE RATE DETERMINED UNDER TITLE 17, SUBTITLE 2 OF THE STATE FINANCE AND PROCUREMENT ARTICLE.

(3) AN ELECTRIC COMPANY SHALL PROVIDE ITS EMPLOYEE BARGAINING UNIT AN OPPORTUNITY TO PROVIDE MAINTENANCE AND OPERATIONS FOR ANY ENERGY STORAGE DEVICE OWNED BY THE ELECTRIC COMPANY.

(4) (I) SUBJECT TO SUBPARAGRAPH (II) OF THIS PARAGRAPH, AN ELECTRIC COMPANY MAY CONTRACT ANY WORK UNDER THIS SECTION NOT CONDUCTED BY THE COMPANY'S EMPLOYEE BARGAINING UNIT TO A QUALIFIED CONTRACTOR.

(II) AN ELECTRIC COMPANY SHALL REQUIRE A CONTRACTOR OR SUBCONTRACTOR ON A PROJECT UNDER THIS SECTION TO:

1. PAY THE AREA PREVAILING WAGE RATE DETERMINED BY THE COMMISSIONER OF LABOR AND INDUSTRY, INCLUDING WAGES AND FRINGE BENEFITS; AND

2. OFFER HEALTH CARE AND RETIREMENT BENEFITS TO 4 THE EMPLOYEES WORKING ON THE PROJECT.

AMENDMENT 2

On page 37, lines 24-26

(III) AN ANALYSIS OF THE ANTICIPATED ENVIRONMENTAL BENEFITS, HEALTH BENEFITS, [AND] ADVERSE ENVIRONMENTAL IMPACTS, AND ADVERSE HEALTH IMPACTS OF THE PROJECT TO THE CITIZENS OF THE STATE;

AMENDMENT 3

On page 38, lines 5-7

(VII) OTHER ADVERSE IMPACTS AND BENEFITS RESULTING FROM THE PROJECT, SUCH AS INCREASED IN–STATE CONSTRUCTION, OPERATION AND MAINTENANCE NEEDS, AND EQUIPMENT PURCHASES;

AMENDMENT 4

On page 38, after line 22:

(9) A NUCLEAR ENERGY GENERATING STATION, INCLUDING A SMALL MODULAR REACTOR, SHALL BE CONSIDERED A PROPOSED QUALIFYING GENERATING STATION AND SHALL PROVIDE DETAILED DOCUMENTATION OF COMPLIANCE WITH COMAR 20.79.02.02 AND COMAR 20.79.03.

The intent of amendment 4 is to make sure environmental justice and community engagement factors that are required for fossil fuel generating facilities are also included for nuclear. If it is determined that these provisions are covered through other mechanisms, that will be sufficient.

AMENDMENT 5

On page 41, after line 7 insert:

PART II. TRANSMISSION ENERGY STORAGE DEVICES.

7–1212.

(A) THE GENERAL ASSEMBLY FINDS AND DECLARES THAT THE STATE HAS A GOAL OF REACHING 1,600 MEGAWATTS OF FRONT–OF–THE–METER TRANSMISSION ENERGY STORAGE DEVICES.

(B) THE COMMISSION SHALL, BY REGULATION OR ORDER, ESTABLISH A COMPETITIVE PROCESS FOR THE PROCUREMENT OF PROJECTS FOR THE CONSTRUCTION AND DEPLOYMENT OF FRONT–OF–THE–METER TRANSMISSION ENERGY STORAGE DEVICES.

(C) (1) (I) ON OR BEFORE JANUARY 1, 2026, THE COMMISSION SHALL ISSUE A PROCUREMENT SOLICITATION FOR APPLICATIONS FOR PROJECTS FOR THE CONSTRUCTION AND DEPLOYMENT OF FRONT–OF–THE–METER TRANSMISSION ENERGY STORAGE DEVICES.

(II) THE PROCUREMENT SOLICITATION SHALL BE FOR A MAXIMUM OF 800 MEGAWATTS OF CUMULATIVE ENERGY STORAGE CAPACITY, AS MEASURED IN EFFECTIVE NAMEPLATE CAPACITY.

(2) ON OR BEFORE OCTOBER 1, 2026, THE COMMISSION SHALL ISSUE A DECISION ON WHETHER TO APPROVE ONE OR MORE PROPOSALS IN ACCORDANCE WITH § 7–1214(B) OF THIS SUBTITLE.

(3) (I) EXCEPT AS PROVIDED IN SUBPARAGRAPH (II) OF THIS PARAGRAPH, THE TRANSMISSION ENERGY STORAGE DEVICES PROCURED IN ACCORDANCE WITH THIS SUBSECTION SHALL BE OPERATIONAL WITHIN 18 MONTHS AFTER A PROJECT IS SELECTED BY THE COMMISSION.

(II) THE COMMISSION MAY EXTEND THE OPERATING DEADLINE UNDER SUBPARAGRAPH (I) OF THIS PARAGRAPH FOR GOOD CAUSE SHOWN.

(D) (1) ON OR BEFORE JANUARY 1, 2027, THE COMMISSION SHALL ISSUE A SECOND PROCUREMENT SOLICITATION FOR THE PROCUREMENT OF PROJECTS FOR THE CONSTRUCTION AND DEPLOYMENT OF FRONT–OF–THE–METER TRANSMISSION ENERGY STORAGE DEVICES.

(2) THE PROCUREMENT SOLICITATION SHALL BE FOR A MAXIMUM OF 800 MEGAWATTS OF CUMULATIVE ENERGY STORAGE CAPACITY, AS MEASURED IN EFFECTIVE NAMEPLATE CAPACITY.

(3) ON OR BEFORE OCTOBER 1, 2027, THE COMMISSION SHALL ISSUE A DECISION ON WHETHER TO APPROVE ONE OR MORE PROPOSALS IN ACCORDANCE WITH § 7–1214(B) OF THIS SUBTITLE.

(4) (I) EXCEPT AS PROVIDED IN SUBPARAGRAPH (II) OF THIS PARAGRAPH, THE TRANSMISSION ENERGY STORAGE DEVICES PROCURED IN ACCORDANCE WITH THIS SUBSECTION SHALL BE OPERATIONAL WITHIN 18 MONTHS AFTER A PROJECT IS SELECTED BY THE COMMISSION.

(II) THE COMMISSION MAY EXTEND THE OPERATING DEADLINE UNDER SUBPARAGRAPH (I) OF THIS PARAGRAPH FOR GOOD CAUSE SHOWN.

7–1213

(A) THE COMMISSION SHALL INCLUDE SPECIFICATIONS IN A PROCUREMENT SOLICITATION ISSUED UNDER § 7–1206 OF THIS SUBTITLE THAT REQUIRE EACH PROPOSAL TO:

(1) INCLUDE A PROPOSED PRICING SCHEDULE FOR THE TRANSMISSION ENERGY STORAGE DEVICE PROJECT;

(2) INCLUDE A COST–BENEFIT ANALYSIS OF THE PROJECT AND THE PROPOSED PRICING SCHEDULE, INCLUDING AN ANALYSIS OF:

(I) THE LOCATIONAL VALUE, DURATION, AND TIME TO DEPLOYMENT OF THE ENERGY STORAGE DEVICES;

(II) AVOIDED OR DELAYED TRANSMISSION, GENERATION, AND DISTRIBUTION COSTS;

(III) AVOIDED EMISSIONS IN THE SHORT TERM AND PROJECTED AVOIDED EMISSIONS IN THE LONG TERM, MEASURED USING THE SOCIAL COST OF CARBON, AS DETERMINED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY OF JANUARY 1, 2025;

(IV) THE VALUE OF THE RAPID DEPLOYMENT OF ENERGY STORAGE DEVICES; AND

(V) ANY OTHER AVOIDED COSTS;

(3) ENSURE THAT THE OWNER OR OPERATOR OF THE PROJECT HAS THE CAPABILITY TO EXPORT ELECTRICITY FOR SALE ON THE WHOLESALE MARKET AND BID INTO THE PJM CAPACITY MARKET UNDER AN AGREEMENT WITH PJM INTERCONNECTION;

(4) ENSURE THAT THE ENERGY STORAGE DEVICES CAN DELIVER THEIR EFFECTIVE NAMEPLATE CAPACITY;

(5) INCORPORATE A COMMUNITY BENEFIT AGREEMENT;

(6) ATTEST IN WRITING THAT ALL CONTRACTORS AND SUBCONTRACTORS WORKING ON THE PROJECT HAVE BEEN IN COMPLIANCE WITH FEDERAL AND STATE WAGE AND HOUR LAWS FOR THE IMMEDIATELY PRECEDING 10 YEARS OR THE DURATION OF THE CONTRACTOR'S OR SUBCONTRACTOR'S BUSINESS OPERATION, WHICHEVER IS LONGER; AND

(7) ENSURE A COMPETITIVE BIDDING PROCESS BY REDACTING PROPRIETARY INFORMATION PROVIDED TO THE COMMISSION.

(B) FRONT–OF–THE–METER TRANSMISSION ENERGY STORAGE DEVICES PAIRED WITH TIER 1 OR TIER 2 RENEWABLE SOURCES, AS DEFINED UNDER § 7–701 OF THIS TITLE, MAY BE INCLUDED IN A PROPOSAL IN RESPONSE TO A PROCUREMENT SOLICITATION UNDER § 7–1212 OF THIS SUBTITLE.

7–1214

(A) IN SELECTING A PROPOSAL FOR A FRONT–OF–THE–METER TRANSMISSION ENERGY STORAGE DEVICE PROJECT, THE COMMISSION:

(1) SHALL SPECIFY THE PRICING SCHEDULE, WHICH SHALL BE A MONTHLY FIXED PRICE REPRESENTING THE VALUE OF THE FRONT–OF–THE–METER TRANSMISSION ENERGY STORAGE DEVICE BEYOND THE PAYMENTS RECEIVED FROM PJM WHOLESALE MARKETS;

(2) SHALL SPECIFY THAT FOR CONTINUED RECEIPT OF PAYMENT UNDER ITEM (1) OF THIS SUBSECTION, AN APPLICANT SHALL DEMONSTRATE, TO THE SATISFACTION OF THE COMMISSION, THAT THE APPLICANT'S ENERGY STORAGE DEVICE IS AVAILABLE AND PARTICIPATING IN THE PJM ENERGY AND CAPACITY MARKET AT NOT LESS THAN THE CLASS AVERAGE AVAILABILITY RATE ESTABLISHED BY PJM INTERCONNECTION FOR COMPARABLE DEVICES;

(3) SHALL INCORPORATE PENALTIES FOR NONPERFORMANCE IN THE CONTRACT, INCLUDING WITHHOLDING OF PAYMENT, FOR ENERGY STORAGE DEVICES THAT FAIL TO MEET AVAILABILITY METRICS;

(4) MAY TERMINATE ENERGY STORAGE DEVICES FROM THE PROGRAM IF DEVICE PERFORMANCE DOES NOT IMPROVE AFTER APPROPRIATE NOTICE AND OPPORTUNITY TO CURE; AND

(5) MAY CONSIDER OTHER NONPRICE FACTORS SUCH AS:

(I) PROJECT MATURITY DATES;

(II) SITE CONTROL; AND

(III) ANY OTHER RELEVANT NONPRICE FACTORS AS DETERMINED BY THE COMMISSION.

(B) THE COMMISSION SHALL:

(1) AFTER GIVING PUBLIC NOTICE, HOLD ONE OR MORE PUBLIC HEARINGS TO RECEIVE PUBLIC COMMENT AND EVALUATE THE PROPOSALS; AND

(2) SUBJECT TO SUBSECTION (C) OF THIS SECTION, ISSUE ONE OR MORE ORDERS TO SELECT A PROPOSAL OR PROPOSALS FOR DEVELOPMENT.

(C) IF THE COMMISSION FINDS THAT NONE OF THE PROPOSALS ADEQUATELY SUPPORT THE GOALS ESTABLISHED UNDER THIS SUBTITLE THE COMMISSION MAY END THE SOLICITATION PROCESS WITHOUT SELECTING A PROPOSAL.

7–1215

(A) FOR ANY PROPOSAL SELECTED UNDER THIS PART, THE COMMISSION MAY ADOPT CONDITIONS FOR THE CONSTRUCTION AND OPERATION OF FACILITIES INCLUDED IN THE PROPOSAL.

(B) AN ORDER SELECTING A PROPOSAL UNDER § 7–1214 OF THIS SUBTITLE BESTOWS THE SAME RIGHTS TO THE SELECTED PROPOSAL THAT A GENERATING SYSTEM WOULD OTHERWISE BE GRANTED THROUGH A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY UNDER § 7–207 OF THIS TITLE IF THE SELECTED PROPOSAL IS REVIEWED UNDER AN ALTERNATIVE PROCESS AS DETERMINED BY THE COMMISSION.

7–1216

ANY TRANSMISSION ENERGY STORAGE DEVICE BUILT IN ACCORDANCE WITH THIS SUBTITLE SHALL COUNT TOWARD THE ENERGY STORAGE DEVICE DEPLOYMENT GOALS UNDER § 7–216.2 OF THIS TITLE.

7–1217

ON OR BEFORE DECEMBER 31, 2026, THE COMMISSION SHALL REPORT, IN ACCORDANCE WITH § 2–1257 OF THE STATE GOVERNMENT ARTICLE, TO THE GENERAL ASSEMBLY ON THE EFFECTIVENESS OF THE PROCUREMENT PROCESS ESTABLISHED UNDER THIS PART.

AMENDMENT 6

On page 41, after line 7

SUBTITLE 12. ENERGY PROCUREMENT.

PART I. DEFINITIONS; GENERAL PROVISIONS.

7-1218.

(A) IN THIS SUBTITLE THE FOLLOWING WORDS HAVE THE MEANINGS INDICATED.

(B) "EFFECTIVE NAMEPLATE CAPACITY" MEANS THE AMOUNT OF ENERGY AN ENERGY STORAGE DEVICE CAN DELIVER CONTINUOUSLY TO THE ELECTRIC DISTRIBUTION SYSTEM OVER A 4-HOUR PERIOD.

(C) "ENERGY STORAGE DEVICE" HAS THE MEANING STATED IN § 7-216 OF 30 THIS TITLE.

(D) "REC-II" HAS THE MEANING STATED IN § 7-701 OF THIS TITLE.

(E) "REC-II PAYMENT" MEANS THE MONETARY VALUE OF A REC-II GENERATED AND SOLD BY AN ENERGY GENERATING SYSTEM AWARDED A CONTRACT IN ACCORDANCE WITH THIS SUBTITLE.

7-1219.

(A) AN APPLICATION FOR A PROPOSED PROJECT UNDER THIS SUBTITLE IS SUBJECT TO A COMMUNITY BENEFIT AGREEMENT.

(B) A COMMUNITY BENEFIT AGREEMENT SHALL:

(1) PROMOTE INCREASED OPPORTUNITIES FOR LOCAL BUSINESSES AND SMALL, MINORITY, WOMEN-OWNED, AND VETERAN-OWNED BUSINESSES IN THE CLEAN ENERGY INDUSTRY;

(2) ENSURE THE TIMELY, SAFE, AND EFFICIENT COMPLETION OF THE PROJECT BY:

(I) FACILITATING A STEADY SUPPLY OF HIGHLY SKILLED CRAFT WORKERS WHO SHALL BE PAID NOT LESS THAN THE PREVAILING WAGE RATE DETERMINED BY THE COMMISSIONER OF LABOR AND INDUSTRY UNDER TITLE 17, SUBTITLE 2 OF THE STATE FINANCE AND PROCUREMENT ARTICLE; AND

(II) GUARANTEEING THAT THE CONSTRUCTION WORK PERFORMED IN CONNECTION WITH THE PROJECT WILL BE SUBJECT TO AN AGREEMENT THAT:

1. ESTABLISHES THE TERMS AND CONDITIONS OF EMPLOYMENT AT THE CONSTRUCTION SITE OF THE PROJECT OR A PORTION OF THE PROJECT;

2. GUARANTEES AGAINST STRIKES, LOCKOUTS, AND SIMILAR DISRUPTIONS;

3. ENSURES THAT ALL WORK ON THE PROJECT FULLY CONFORMS TO ALL RELEVANT STATE AND FEDERAL LAWS, RULES, AND REGULATIONS, INCLUDING ALL REQUIRED TRAINING FOR EMPLOYEES;

4. CREATES MUTUALLY BINDING PROCEDURES FOR RESOLVING LABOR DISPUTES ARISING DURING THE TERM OF THE PROJECT;

5. SETS FORTH OTHER MECHANISMS FOR LABOR-MANAGEMENT COOPERATION ON MATTERS OF MUTUAL INTEREST AND CONCERN, INCLUDING PRODUCTIVITY, QUALITY OF WORK, SAFETY, AND HEALTH; AND 6. BINDS ALL CONTRACTORS AND SUBCONTRACTORS TO THE TERMS OF THE AGREEMENT THROUGH THE INCLUSION OF APPROPRIATE PROVISIONS IN ALL RELEVANT SOLICITATION AND CONTRACT DOCUMENTS;

(3) PROMOTE SAFE COMPLETION OF THE PROJECT BY ENSURING THAT AT LEAST 80% OF THE CRAFT WORKERS ON THE PROJECT HAVE COMPLETED AN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION 10-HOUR COURSE;

(4) PROMOTE CAREER TRAINING OPPORTUNITIES IN THE MANUFACTURING, MAINTENANCE, AND CONSTRUCTION INDUSTRIES FOR LOCAL RESIDENTS, VETERANS, WOMEN, MINORITIES, AND FORMERLY INCARCERATED INDIVIDUALS;

(5) INCLUDE PROVISIONS FOR LOCAL HIRING AND THE HIRING OF HISTORICALLY DISADVANTAGED GROUPS;

(6) USE LOCALLY, SUSTAINABLY, AND DOMESTICALLY MANUFACTURED CONSTRUCTION MATERIALS AND COMPONENTS TO THE EXTENT PRACTICABLE;

(7) REQUIRE THE USE OF SKILLED LOCAL LABOR, PARTICULARLY WITH REGARD TO THE CONSTRUCTION AND MANUFACTURING COMPONENTS OF THE PROJECT, USING METHODS INCLUDING OUTREACH, HIRING, OR REFERRAL METHODS THAT ARE AFFILIATED WITH REGISTERED APPRENTICESHIP PROGRAMS UNDER TITLE 11, SUBTITLE 4 OF THE LABOR AND EMPLOYMENT ARTICLE; AND

(8) AUTHORIZE THE MARYLAND DEPARTMENT OF LABOR AND THE COMMISSION TO CONSIDER, REVIEW, AND ENFORCE A STORAGE DEVELOPER OR ENERGY DEVELOPER'S COMPLIANCE WITH ANY COMMUNITY BENEFIT AGREEMENT.

7-1220.

THE COMMISSION MAY CONTRACT FOR THE SERVICES OF INDEPENDENT CONSULTANTS AND EXPERTS TO IMPLEMENT AND EXECUTE ANY PART OF THIS SUBTITLE.

CHESSA - MD - EEE Fav w Amend SB434 ENERGIZE Act 2

Uploaded by: Robin Dutta

Position: FWA

20 February 2025

Senator Brian Feldman, Chair
Education, Energy, and the Environment Committee
2 West Miller Senate Office Building
Annapolis, Maryland 21401

Oral and Written Testimony
SB434: Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act
Position: Favorable with Amendments

Chair Feldman, Vice Chair Kagan, Members of the Education, Energy and the Environment Committee, thank you for the opportunity to testify on Senate Bill 434, Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act.

I am Robin Dutta, the Executive Director of the Chesapeake Solar and Storage Association (CHESSA). Our association advocates for our over 100 member companies in all market segments across the solar and energy storage industries. Many members are Maryland-based. Others are regional and national companies with an interest and/or business footprint in the state. Our purpose is to promote the mainstream adoption of local solar, large-scale solar, and battery storage throughout the electric grid to realize a stable and affordable grid for all consumers.

I am here to provide testimony on SB434, Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act, with suggested amendments attached.

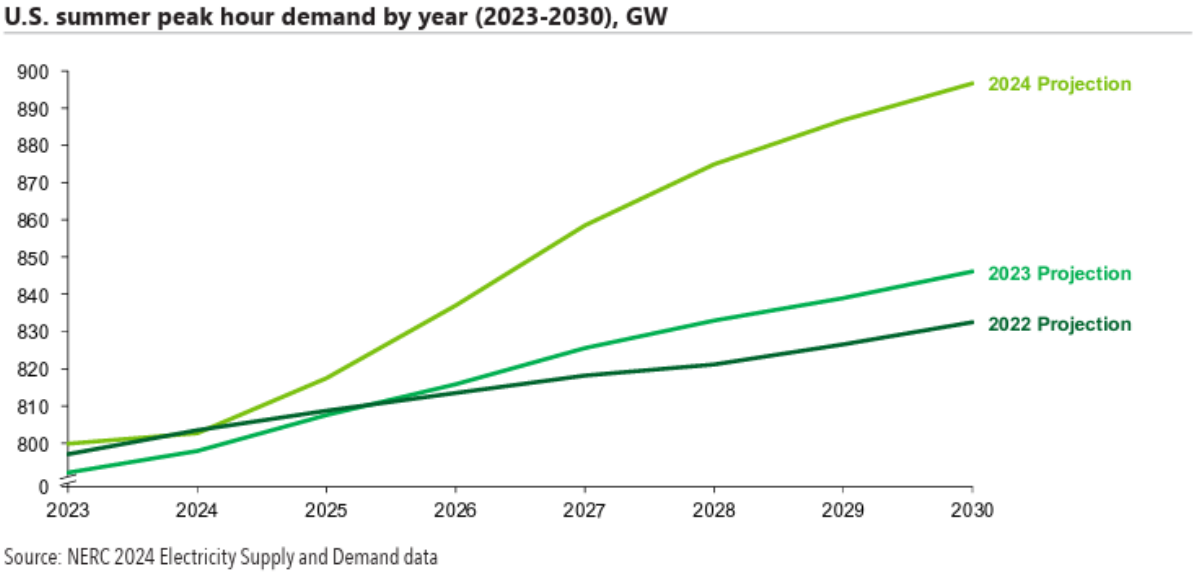
ENERGIZE Maryland Act takes a step towards removing policy barriers for more solar development, however we feel that further action is needed. Maryland is dealing with an increasing energy gap, with projections for higher energy consumption and increasing periods of peak demand. Mainstream adoption of in-state solar and energy storage can be crucial to the solution. Our suggested amendments would strengthen SB434 and enable more solar and storage to be built in a manner that protects ratepayers, encourages greater solar deployments, and places downward pressure on Maryland energy bills.

The Problem: Maryland's Widening Energy Gap

Marylanders are becoming much more sensitive to grid disruptions and electric price spikes. The state is on the path to see increasing electric demand over the long term. And, there is already straining in its electric system. Maryland only generates about 60 percent of the electric

generation it demands[1]. But, importing electricity isn't an automatic solution. Nine of the 13 states in the PJM Interconnection (where Maryland resides) also must import electricity to serve their electric demand. And the Maryland Energy Administration (MEA) is projecting load growth, potentially as much as 2 percent per year[2]. There's growing demand and competition for an energy supply that needs to increase.

Contributing Problem: Higher Electric Demand Across the County



Source: NERC 2024 Electricity Supply and Demand data

The grid of the not-so-distant future will have the combined roles that today's electricity, natural gas system, and gas stations have. For the grid to serve those roles, it will need to look and act differently. It will have higher statewide electric loads, and greater electric demand in peak periods. And, the higher peak demand gets, the more expensive the electric grid becomes, due to expensive infrastructure expansion and higher peak energy pricing. By lowering peak demand, clean energy can lower the cost of the grid.

A January 2025 report from the U.S. Department of Energy shows that projected peak demand growth is only increasing, with electricity supply and demand data from the North American Energy Reliability Council showing the estimates being revised upwards each year since 2022.[3] If Maryland's electric future follows the projected national trend, it needs to step up the clean energy build-out throughout the state at the same time as handling fossil fuel retirements. That means scaling up statewide solar adoption of all kinds, as soon as possible.

Layering on the problem are the faults within the PJM Interconnection, both with their capacity markets and their interconnection processes. The recent PJM capacity auction could cause

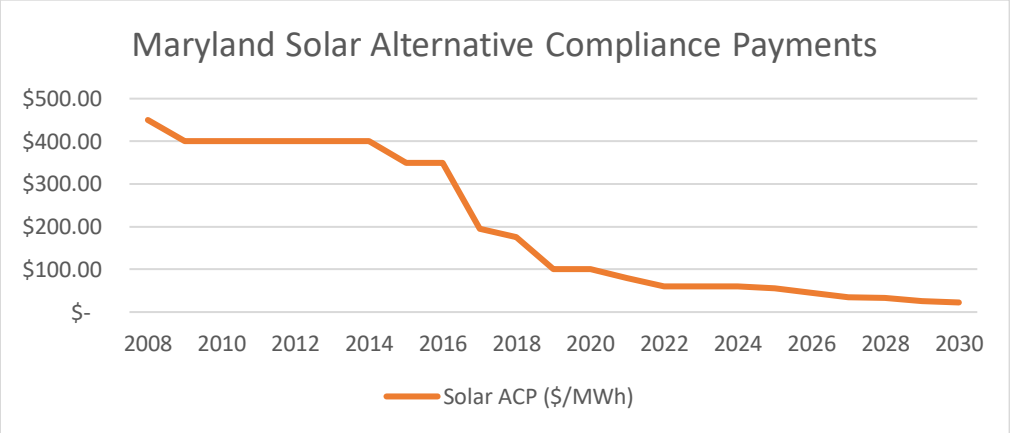
[1] https://www.eia.gov/state/analysis.php?sid=MD
[2] Maryland Energy Administration. "Reaching 100 Percent Net Carbon-Free Electricity in Maryland". January 2025. p.19
[3] U.S. Department of Energy. "Pathways to Commercial Liftoff: Virtual Power Plants 2025 Update". January 2025. p.7

electric bill in Maryland to increase as much as 24 percent, according to an August 2024 report from the Maryland Office of People's Counsel. The MEA describes the Baltimore Gas & Electric service area as a "congested territory".[4] There are then certain generating units that must run and can drive up capacity prices, as it happened in the most recent PJM capacity auction. The way to relieve congestion and grid strain is to lower peak demand, offset consumer electric load, and build a lot of new local generating capacity.

The Solution: Firm Clean Energy Does the Job at a Good Price

Firm capacity and generation to be relied upon does not have to come from incumbent generation technologies, such as coal, natural gas, or nuclear energy. Solar and wind technologies are ready to scale up at an increasing rate, when part of a portfolio that includes battery storage, to provide firm, reliable generation when consumers need it.

According to a 2021 National Renewable Energy Laboratories (NREL) study, residential rooftop, commercial rooftop, and large-scale solar systems achieved cost reductions of 64, 69, and 82 percent, respectively, since 2010. And, in the last ten years, as measured by the Solar Energy Industries Association and the research firm WoodMackenzie, solar costs have declined by nearly 40 percent[5]. Maryland's Renewable Portfolio Standard generally mirror these cost declines, as shown in the graph below.



The solar ACP represents the upper bounds of what Solar Renewable Energy Credits (SRECs) can be valued for project development and compliance purposes. In 2008, the solar Alternative Compliance Payment (ACP) that utilities and suppliers had to pay in the event of a solar supply shortfall was $450 per Megawatt-hour. In 2025, the solar ACP is $55 per Megawatt-hour, an 88 percent decline in value. The rate of decline in solar ACP since 2018 has gotten ahead of solar project development costs, in part due to cost increases due to the trade tariffs, the COVID-19

[4] Maryland Energy Administration. "Reaching 100 Percent Net Carbon-Free Electricity in Maryland". January 2025. p.22

[5] SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight Q4 2024. https://seia.org/research-resources/solar-industry-research-data/#:~:text=The%20cost%20to%20install%20solar,deploy%20thousands%20of%20systems%20nationwide.

pandemic, disruptions in supply chains, and a shortage of available labor. While residential, commercial, community solar, and large-scale solar have seen massive cost declines over the life of Maryland's Renewable Portfolio Standard, the issue in the last few years has been a misalignment between the solar ACP and the actual project costs across these increasingly differentiated market segments.

Today, large-scale solar and land-based wind now represent the cheapest new electric generating sources in the United States, according to the firm Lazard. New clean energy generation can be built and energized to generate when electricity demand is greatest during the day. When building portfolios of energy storage, those cheap solar and wind facilities can charge those assets to be used day or night.

The data shows that distributed solar and storage strategies are scalable and help the electric grid. According to a study from The Brattle Group, distributed resources, which include a range of advanced energy technologies (such as local solar, storage, smart appliances, internet-connected thermostats, and energy management software) provide the *same* resource adequacy as a natural gas plant at 40-60 percent lower cost. The firm Deloitte analyzed the benefits that distributed energy resources including rooftop solar could deploy throughout local distribution grids in a 2024 report. Their conclusion was that scaling up the deployment and adoption of residential solar and related distributed resources would contribute to improved resiliency, reliability, and resource adequacy.

The solar industry has been maturing as a technology and an industry. Now, as Maryland needs more firm, reliable energy, solar and battery storage is ready to provide a clean energy solution to the energy problem.

The Solution: Build More Solar and Storage in Maryland

With policy reforms today, solar deployments trends can increase fairly quickly. Freezing the solar ACP at 2024 levels would provide some support to develop certain types of Maryland solar, however CHESSA suggests that RPS policy evolution treat different types of solar project differently. The solar industry is one industry, but our different market segments are very different, with their own cost structures, hardware needs, and financing realities. The industry has evolved from the point where a one-size-fits-all incentive was the most effective option. And, in order to provide an effective solution for Maryland's widening energy gap, it is important for all types of solar to thrive. For those reasons, CHESSA suggests that SB434 be amended to include these provisions to evolve the Maryland RPS solar carve-out:

- Create a new large-scale solar procurement, that is an additional RPS compliance obligation, to be initiated in Q4 2025 for at least 3,000 MW of new Maryland solar for the wholesale market
- Transition from the current SREC program and create a new distributed solar incentive program, that is an additional RPS compliance obligation, for at least 3,000 MW of new in-state solar capacity. Different project types would receive different incentive values based on what they need, as determined by the Commission.

Energy storage also needs to be a major part of any energy solution. Maryland already has a 3 GW storage deployment goal by 2033. CHESSA recommends that HB505 be amended to include the creation of two storage programs as part of the solution to close the energy gap:

- A new energy storage procurement to be initiated in Q4 2025 for at least 1,600 MW; and
- A new distributed storage incentive program, for at least 1 GW of battery storage capacity paired with solar projects such as residential, commercial, and community solar applications.

The attachment provides additional detail to these suggested amendments.

Conclusion

Maryland has an energy problem that clean energy is ready to solve. Large-scale solar and storage projects can provide the lump sum of electricity to Maryland's grid. Distributed solar and storage projects will reduce grid strain and allow existing grid infrastructure to be used more cost-effectively. Overall, more solar and storage projects in Maryland will create downward pressure on energy costs.

Meeting resource adequacy needs and growing electric demand can be an expensive proposition for the ratepayer. Utility-centric solutions are fully funded by the ratepayer. Wholesale energy solutions do not address local resiliency and reliability needs. All-of-the-above solar and storage strategies mean creating incentives that leverage private capital instead of directing ratepayers to foot the entire bill.

If amended as CHESSA recommends, we ask for a favorable report on SB434.

Please reach out with any questions on solar and storage policy. CHESSA is here to be a resource to the committee.

Sincerely,

Robin K. Dutta

Robin K. Dutta
Executive Director
Chesapeake Solar and Storage Association
robin@chessa.org

MD - CHESSA Suggested Amendments for HB505 SB434.p
Uploaded by: Robin Dutta
Position: FWA

Chesapeake Solar & Storage Association

Solar and Energy Storage Solutions to Close MD Energy Gap

Bottom Line

- Revamp energy policies to prioritize in-state solar and energy storage capacity to maximize the grid benefits to MD energy consumers;
- Make Maryland less reliant on the flawed PJM structures by deploying more in-state clean energy and by reducing statewide peak demand versus business as usual;
- Create new, in-state clean capacity by using private capital to avoid higher ratepayer costs

Part 1: Implement Large-Scale Competitive Procurements Quickly

Large-scale solar procurements: Start recurring large-scale solar procurements in Q4 2025 that would target deployment of at least 3 GW of new utility-scale solar by 2035. This could include nearly 1,700 MW that have existed the PJM queue or are in the near-term queue, as well as new projects. Competition should be based on REC pricing and/or energy pricing, with the cost of building systems borne by the developers, not the ratepayers. **[Increases in-state generation]**

Energy storage procurements: Implement a "front of meter" storage procurement process to be initiated in Q4 2025 for at least 1,600 MWh of energy storage projects. This can include over 1,600 MW of energy storage capacity without a path to be built unless they win this Maryland procurement process. Competition to award capacity-only contracts should be based on cost and project maturity to address near-term resource needs, with the cost of building systems borne by the developers, not the ratepayers. **[Deploys dispatchable capacity and lowers grid strain]**

Part 2: Revamp Distributed Energy Programs to Prioritize Deployment

Transition period: Close the current solar/SREC program by the end of 2027 to new projects in a manner that protects existing projects, solar owners, and ratepayers, ensuring that those projects remain online and generating electricity. All of these projects are built with private capital, supported by the RPS/REC programs. **[Increases in-state generation and lowers net demand/grid strain]**

Create new distributed solar incentive program: This covers residential, commercial, and community solar projects. Program would administratively set REC incentives for new solar projects, set by the PSC, and under their discretion to revise on a going forward basis. This follows New Jersey's policy model when they revamped their solar programs. This would deploy at least 3 GW of new distributed solar between 2028 and 2035. All of these projects would be built primarily with private capital, supported by this new program. **[Increases in-state generation and lowers net demand/grid strain]**

Create new distributed storage incentive program: This program would offer a grant to support deployment of dispatchable, firm distributed capacity. At least 1 GW of new energy storage capacity would be paired with existing and new distributed solar projects with the help of up-front incentives. Systems would then need to participate in grid services programs, as created by the PSC either through the implementation of 2024's DRIVE Act or implementing recommendations from the Energy Storage Work Group. This would count towards the state's 3 GW by 2033 energy storage mandate. **[Creates distributed dispatchable capacity and lowers grid strain]**

2.18.2025_ENERGIZE MD Act_Written Testimony.pdf

Uploaded by: Saif Ratul
Position: FWA

STATE OF MARYLAND

OFFICE OF THE GOVERNOR
Wes Moore

February 18, 2025

The Honorable Brian Feldman
Chair, Education, Energy, and the Environment Committee
2 West Miller Senate Office Building
Annapolis, Maryland 21401

RE: Favorable with Amendments - SB0434 - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Chair Feldman, Vice-Chair Kagan, and Distinguished Members of the Education, Energy, and the Environment Committee,

On behalf of the Moore-Miller Administration, I respectfully ask the committee to issue a favorable report on SB0434 - Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act.

Maryland stands at a pivotal moment in its energy policy. The Climate Solutions Now Act of 2022 established ambitious benchmarks for the state, mandating a 60% reduction in greenhouse gas emissions by 2031 and achieving carbon neutrality by 2045. Governor Moore has reaffirmed Maryland's commitment by setting the goal of achieving 100% clean electricity, ensuring the state remains a leader in renewable and zero-carbon energy, and driving economic growth, while addressing cost, reliability, and supply-demand challenges.

The legislation builds on the Clean Energy Jobs Act by **establishing nuclear energy as a clean energy source** eligible to contribute towards meeting the state's clean energy goals. The legislation also **introduces a procurement framework – modeled after Maryland's offshore wind approach – to encourage the development of new nuclear energy in the state**. This includes both traditional nuclear reactors and advanced small modular reactors (SMRs), ensuring a reliable carbon-free energy future.

This legislation takes a key step towards supporting more in-state solar development by **freezing the existing statutory alternative compliance payment (ACP) level**, ensuring stability in the market for solar renewable energy credits (SRECs). As the ACP schedule declines, SREC values have weakened, making it more challenging to drive new solar development. By stabilizing the

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governor.maryland.gov

market, this legislation provides the certainty needed to attract investment, expand in-state solar projects, and accelerate Maryland's transition to clean energy.

In addition, the legislation modernizes Maryland's offshore wind (OSW) solicitation process to promote greater competition and cost-saving measures for ratepayers. Currently, state law sets a public rate cap, making Maryland one of only two states actively procuring offshore wind while allowing developers to bid up to the maximum limit, potentially inflating costs. To drive more competitive bidding, **the legislation shifts to a confidential reference price or upper limit set by the Public Service Commission (PSC)**, preventing developers from maximizing bids at the expense of ratepayers. Additionally, the bill **relaxes the interconnection requirements** for offshore wind, permitting greater flexibility in the interconnection of these vital projects.

Lastly, the legislation aims to drive in-state investment, similar to the offshore wind industry, that creates a labor-friendly environment within its nuclear procurement mechanism. **The Clean Energy Business Development Fund ensures that investments can be made in business development for all types of clean energy technologies, including SMRs**.

The administration is offering several amendments to ensure these investments are focused on developing more in-state generation, which include:

- Prospectively applying ACP freeze to new projects;
- Technical changes to the Clean Energy Business Fund; and
- A comprehensive report on the return of the state's investments in solar development and a timeline for the state to achieve its 100% goal.

With these provisions and amendments, the ENERGIZE Maryland Act aims to ensure Maryland can continue in its pursuit of clean electricity and energy independence.

I respectfully request the committee for a **favorable with amendment** report on Senate Bill 434 - ENERGIZE Maryland Act.

Sincerely,

Saif Ratul
Deputy Legislative Officer
Office of Governor Moore

AMENDMENTS TO SB434
(First Reading File Bill)

On page 7 in lines 18 and 26, on page 8 in lines 6, 15, and 24, and on page 9 in line 4, in each instance, after "energy" insert "**INCLUDING AN AMOUNT SET BY THE COMMISSION OF SOLAR ENERGY GENERATING SYSTEMS THAT FIRST INTERCONNECTED TO THE GRID AFTER DECEMBER 31, 2024**".

On page 11 in line 1 and 2, in each instance, strike "**YEAR**" and substitute "**TWO COMPLIANCE YEARS**", and after line 5 insert

(H) (1) IN DETERMINING THE AMOUNT OF ENERGY THAT SOLAR ENERGY GENERATING SYSTEMS PRODUCE THAT FIRST INTERCONNECTED TO THE GRID AFTER DECEMBER 31, 2024 THE COMMISSION SHALL UTILIZE THE PJM GATS SYSTEM TO DETERMINE THE ACTUAL OUTPUT OF NEWLY INTERCONNECTED SOLAR ENERGY GENERATING SYSTEMS; AND

(2) THE COMMISSION SHALL NOT INCLUDE SOLAR ENERGY GENERATING SYSTEMS THAT HAVE BEEN RECOMMISSIONED OR CONTINUED OPERATIONS THROUGH REPLACEMENT OF SOLAR PHOTOVOLTAIC PANELS ON AN EXISTING SOLAR ENERGY GENERATING SYSTEM.

On page 23 in line 4 after "energy" insert "**THAT WAS FIRST INTERCONNECTED TO THE ELECTRICAL GRID BEFORE JANUARY 1, 2025**", in lines 15 and 21, in each instance strike the bracket, and in line 22 after the period, insert

"**6 CENTS FOR EACH KILOWATT-HOUR OF SHORTFALL FROM REQUIRED TIER 1 RENEWABLE SOURCES THAT IS TO DELIVERED FROM SOLAR ENERGY THAT WAS FIRST INTERCONNECTED TO THE ELECTRICAL GRID AFTER DECEMBER 31, 2024; AND**

4.".

On page 44, after line 2 insert

"(b) The purposes of the Fund are to:

(1) provide financial assistance, business development assistance, and employee training opportunities for the benefit of emerging businesses in the State, including minority–owned emerging businesses, to prepare those businesses to participate in the emerging **[**offshore wind**]** **CLEAN ENERGY** industry; and

(2) encourage emerging businesses in the State, including minority–owned emerging businesses, to participate in the emerging **[**offshore wind**]** **CLEAN ENERGY** industry.

SECTION 4. AND BE IT FURTHER ENACTED, That:

(a) The Maryland Energy Administration, in consultation with the Public Service Commission shall report on the value of multiplying renewable energy credits received by certain qualifying solar energy generators under Chapter 595 of the 2024 Laws of Maryland and the increased alternative compliance payment price for certain qualifying solar generators established by this Act.

(b) The report shall include:

(1) A full analysis of the results of these incentives including:

(i) any ratepayer impacts;

(ii) recommendations that are required to achieve the State's solar energy goals under the Clean Energy Standard; and

(iii) recommend a date by which the state may reasonably achieve 100% clean electricity.

(c) The report shall also include an evaluation of the State's progress toward achieving 100% clean electricity, including an estimated date by which this goal can be achieved.

(d) On or before October 1, 2032, the Maryland Energy Administration shall report its findings and recommendations to the Senate Committee on Education Energy and the Environment and the House Economic Matters Committee, in accordance with § 2-1257 of the State Government Article.".

On page 44 strike in their entirety lines 11 through 15 inclusive, and in lines 3 and 9 strike "4" and "5", respectively, and substitute "5" and "6", respectively.

SB434_CPSR_UNFAV_EEE_20Feb2025.pdf
Uploaded by: Alfred Bartlett, MD
Position: UNF

Committee: Education, Energy, and the Environment
Testimony on: SB434 "Empowering New Energy Resources and Green Initiatives Toward a Zero–Emission (ENERGIZE) Maryland Act"
Position: Unfavorable
Hearing Date: February 20, 2025

The Chesapeake Chapter of Physicians for Social Responsibility (CPSR) submits this testimony in opposition to SB434. We appreciate the Administration's urgency in moving Maryland away from climate disrupting fossil fuel-generated electricity. We also acknowledge the conclusion by the Maryland Energy Administration that we have fallen far behind our targets for development of clean renewable energy.

However, as an organization focused on addressing major threats to human health and well-being, we cannot agree with the basic proposition of this bill: that the response should be turning our focus and support to the development of new nuclear energy, and specifically to Small Modular Reactors (SMRs).

This disagreement is based on one fundamental reality:

While nuclear energy does not emit greenhouse gases, it is <u>not</u> clean.

Nuclear energy generates a unique category of waste – in the form of "spent fuel" – that represents both present and generational danger to human and environmental health. Fissionable material (fuel) is removed from a nuclear reactor when it can no longer sustain the chain reaction that is the source of the reactor's thermal energy. It is then stored, initially in cooling tanks, and then in concrete-surrounded "dry casks." However, although it cannot sustain the reactor's chain reaction, spent fuel is highly radioactive – during a nuclear reactor's operation, several dangerous isotopes actually **increase** in quantity due to fission reactions, neutron capture, and radioactive decay.[1]

Spent fuel is extremely hazardous to human health both now and for centuries:

- In recently unloaded spent fuel, highly radioactive isotopes including Cesium-137 and Americium-241 create intense radiation that can penetrate the body and destroy DNA, especially the fast-replicating cells in the intestinal tract and bone marrow (red and white blood cells and immunity producing cells), as well as the nervous system – this is "Acute Radiation Sickness" (ARS).
  - **A person exposed to 500 milligrams of such spent fuel – the equivalent size of one Extra Strength Tylenol - for 30 seconds at 1 meter will develop severe ARS and die without intensive care.**
  - **If exposed for twice that amount – the equivalent of two Extra Strength Tylenols – for 30 seconds at 1 meter, a person will die within hours or days regardless of treatment.**

    (The 30-year half-life of Cesium-137 means that these outcomes could take about a minute of exposure today to spent fuel generated in 1995, instead of 30 seconds.)
- Spent fuel also contains longer duration isotopes that are also deadly. In addition to Americium-241, these include Technetium-99 and Plutonium-239. These are readily absorbed if released as particles and inhaled, or if they enter the food chain; they are retained in the body, and have severe long-term health effects including cancer.
  - **The half-life of Americium-241 is <u>432 years</u>.**
  - **The half-life of Plutonium-239 is <u>24,100 years</u>.**
  - **The half-life of Technetium-99 is <u>211,000 years</u>.**

Because it is extremely hazardous, spent fuel is kept at the reactor sites where it's generated.

[1] International Atomic Energy Agency (IAEA), Technical Reports Series No. 462: Nuclear Fuel Cycle Information System

- At Calvert Cliffs, between one-third and half of the spent fuel is stored in pools that require cooling[2] because the spent fuel generates heat – loss of power would cause evaporation and exposure of the highly radioactive spent fuel (Calvert Cliffs has backup systems for power loss – however, loss of power at the Fukushima Daiichi Plant was one source of radiation release). The remainder is stored in longer-term steel and concrete encased "Dry Cask Storage."[2]
- In 50-plus years, the U.S. government and nuclear industry have not been able to develop a convincingly safe "permanent" nuclear waste storage location (Nevadans rejected Yucca Mountain).

As a result, Maryland already has an estimated 1,420 metric tons (about 1,565 tons) of radioactive spent fuel generated since the Calvert Cliffs reactors began operating in 1975 and 1977.[3]

While U.S. nuclear plants have a good record of safety, including in onsite spent fuel management, there have been accidents. In the U.S. alone, there have been several events of leakage from spent fuel pools (in New York, Connecticut, and New Jersey) resulting in radioactive isotope contamination of ground water. In 2011, the nuclear plant at Fort Calhoun, Nebraska - which was designed to withstand a "500-year flood" on the Missouri River – was actually flooded and had to be shut down.

Even without an accident, growing concern is being raised about radioactive Tritium leaks from damaged subsurface pipes and from spent fuel pools.[4] Tritium is another product of the nuclear reactor and is contained in spent fuel. It is readily soluble in water and is present in the water of spent fuel storage pools, and leaks have also resulted in contamination of ground water. Although Tritium is less radioactive than isotopes like Cesium-137, it is readily absorbed by humans and concentrated in the body, causing DNA damage; rapidly developing cell structures like fetuses are at highest risk.[5]

- Since the 1990s, 43 out of 61 nuclear power sites in the U.S. have had significant Tritium leaks that contaminated groundwater in excess of federal drinking water limits. The most recent leak occurred in November, 2022, involving 400,000 gallons of Tritium-contaminated water from the Monticello nuclear station in Minnesota. The leak was kept from the public for several months. When the operator could not stop the leak, it was forced to shut down the reactor to fix and replace piping. By this time, Tritium reached the groundwater that enters the Mississippi River.[5]

Spent fuel storage is also considered a potential target for terrorist attack, including the sort of aerial drone attack being widely seen in the Ukraine conflict. The release of radioactive material from such an attack would affect large numbers of people and render a large area uninhabitable.

Perhaps most importantly, the unimaginably long lifespan of this large and growing amount of dangerous nuclear waste – stretching thousands of years into the future - is a thoughtless and harmful legacy to the generations who follow us. We have experienced remarkable change since the first colonists of Maryland – led by a Calvert – arrived only 400 years ago. No civilization has lasted 24,000 years. Considering just the unpredictability of our present political situation, none of us can say with certainty what forces and even what information will determine the interaction of future inhabitants with this deadly inheritance.

Sadly, we have accepted the legislature's need to support further extension of Calvert Cliffs' operation. But it makes no sense to consider adding more nuclear to our energy mix – especially having multiple SMRs scattered around the state. The only SMR design currently approved (NuScale) is the same basic category of reactor as Calvert Cliffs – Light Water. This means they would generate the same types of spent fuel waste, and have to do the same onsite storage. While SB434 does include a Nuclear Regulatory Commission compliant waste management plan, the problem is that this waste management would be in multiple locations, which can only increase the risk of an adverse event.

We ask the legislature to be wise in considering these concerns, and for realism:

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[2] U.S. Dept. of Energy, Office of Nuclear Energy; *Spent Nuclear Fuel and Reprocessing Waste Inventory*, November 2022
[3] Nuclear Decommissioning Collaborative; Calvert Cliffs 1&2 https://decommissioningcollaborative.org/calvert-cliffs-1-2/
[4] https://hsph.harvard.edu/news/studies-to-examine-health-risks-of-new-england-nuclear-power-plants/
[5] https://lucian.uchicago.edu/blogs/atomicage/2023/06/26/exploring-tritiums-danger-a-book-review-by-robert-alvarez-via-the-bulletin-of-atomic-scientists/

- Since this urgent push for new nuclear is substantially being driven by the plans to build Data Centers with large electricity demand, consider that:
  - Just the three large data centers planned for Frederick, Prince George's, and Montgomery Counties have total projected electricity capacity needs of between 3,520 and 4,767 Megawatts (MW). (Calvert Cliffs total capacity is 1,800 MW.)
  - Building a 300 MW SMR at Calvert Cliffs would meet less than 10 percent of this requirement.
  - With an average proposed SMR size of 50 to 80 MW, meeting the remaining need for just these three centers will require between 40 and 90 SMRs.
  - Each of these hypothetical SMRs will represent a potential radioactive accident.
- Considering the difficulties of siting 2 to 5 MW solar projects, siting any large number of SMRs will be an extraordinary challenge.
- As many others will point out – despite the optimism of the Nuclear Industry presentation – an SMR has not yet been successfully built in the U.S.
  - The one serious attempt to build a NuScale SMR – the "Carbon Free Power" Project in Idaho – was abandoned after the cost rose from $3.6 billion to $9.3 billion.
  - All recent nuclear projects in the U.S. were delayed and finally abandoned except for the two-reactor Vogtle project in Georgia – which ended up taking 14 years instead of the planned 7 and cost $37 billion instead of the planned $14 billion.
  - Some SMR plans involve substantially increased uranium fuel concentration – up to 20 percent fissionable material, from the usual 3-5 percent – which would substantially increase the risk of any accident and create more dangerous on-site waste.[6]

Unfortunately, SB434 does not reflect such realism.

- Despite the unique characteristics of nuclear power, SB434 treats it like other construction.
  - Subsection 7-1203(4)(III) requires "an analysis of the anticipated environmental benefits, health benefits, and environmental impacts of the project to the citizens of the state," but entirely ignores the consideration of risk, especially the health risk discussed above.
- The Community Benefit Agreements specified in Subsection 7-1206 include appropriate fair labor principles, training and apprenticeships, preference for local and U.S.-derived materials and manufactured goods, dispute management, and more – but miss the important dimension of community voice in development of these complex projects, including consideration of their unique risks.
- The long timeline for development of SMRs – if it actually happens – doesn't match the much shorter timeline of proposed data center development. An SMR built in 5 – or more likely 10 – years wouldn't solve the demand problem we're facing now.

The greatest cost of this preference for nuclear may be the opportunity cost.

By convincing ourselves that our need for affordable and clean energy development will be met by SMRs – despite them having proven to be highly expensive and whose existence would be a long time distant – we take our eye off the ball… expanding the real clean renewable energy development we have committed to, which is feasible to build and much less expensive.

In opposing SB434, we entreat the legislature to instead continue removing the constraints and designing the effective and affordable incentives that will advance that clean renewable energy we have envisioned.

We recommend an unfavorable report on SB434.

Respectfully,

Alfred Bartlett, M.D., F.A.A.P.
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Chesapeake Physicians for Social Responsibility alfredbartlett@msn.com

[6] https://www.energy.gov/nnsa/articles/nnsa-administrator-jill-hruby-issues-statement-understanding-and-assessing-risks

SB434 Testimony - Andrew Hinz.pdf
Uploaded by: Andrew Hinz
Position: UNF

Testimony Supporting SB434
Education, Energy, and the Environment Committee
February 18, 2025

Andrew Hinz
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443-617-4079

Position: OPPOSE

Members of the Committee,

The bill is misguided. Please refer to draft federal legislation directly below, the Clean Renewable Energy Act, specifically though not exclusively "Electricity is comparable to air and water as it is required for individuals and communities to survive and thrive. The generation, transportation, and the consumption of electricity is in the public interest. Electricity generated using clean renewable technologies including, but potentially not limited to in the future, solar, wind, moving water, and geothermal is available in fundamentally limitless quantities and is comparatively non-polluting. Electricity generated with non-renewable resources pollutes air and water and land and adversely affects planetary and human health. Clean renewable electricity is inherently in the public interest because it overwhelmingly reduces the need for appropriation of shared and limited natural resources.":

The Clean Renewable Electricity Act

1. **Short Title; Purpose; Table of Contents**

Short Title. The Clean Renewable Electricity Act.
Purpose. The Act will assign the Federal Renewable Energy Commission, formerly the Federal Energy Regulatory Commission, the responsibility of leading the transformation of the national electricity grid from reliance on Non-renewable and polluting sources of electricity generation that directly contribute to human-induced atmospheric warming to exclusive use of Clean renewable sources of electricity generation, within a defined timeframe appropriate to the scale of the risk resulting from atmospheric warming that is challenging the continuing viability of that grid. The Act also prioritizes opportunity for Environmental Justice communities, Low-income communities, and Indigenous tribes and nations to participate, invest in, and lead that transition, and ensures fair treatment of those communities by the Federal Renewable Energy Commission.
Table of Contents.

9-Eminent Domain
10-Status for Environmental Justice Communities, Low-Income Communities, and Indigenous Tribes and Nations
11-Methane or Natural Gas Exports
12-Public Participation
13-Retail Electricity Billing Transition Information
14-Regulatory Independence

2. Findings. Electricity is comparable to air and water as it is required for individuals and communities to survive and thrive. The generation, transportation, and the consumption of electricity is in the public interest. Electricity generated using clean renewable technologies including, but potentially not limited to in the future, solar, wind, moving water, and geothermal is available in fundamentally limitless quantities and is comparatively non-polluting. Electricity generated with non-renewable resources pollutes air and water and land and adversely affects planetary and human health. Clean renewable electricity is inherently in the public interest because it overwhelmingly reduces the need for appropriation of shared and limited natural resources.

3. **Jurisdiction.** The provisions of this Act shall apply to the generation, transmission, and sale of electricity in interstate commerce.

4. Definitions. When used in this Act, **"Clean renewable electricity"** means electricity generated from solar, wind, moving water, and geothermal resources and specifically excludes electricity generated using fossil fuel, biogas, biomass, waste incineration, and nuclear power but does not exclude future sources of energy generated without consumption of fuel and generated without emitting pollution or waste—it also means electricity generated without harming communities, including Environmental justice communities and Low-income communities, and without violating the free, prior and informed consent of Indigenous Tribes or Nations in compliance with the United Nations Declaration on the Rights of Indigenous Peoples, specifically but not limited to Articles 10, 11, 19, 23, 28, 29, and 32; **"Moving water"** means tidal or Qualifying small-scale hydro; **"Qualifying small-scale hydro"** means hydropower constructed and operated so that the water surface elevation at any given location and time that would have occurred in the absence of the hydroelectric project is maintained. **"Non-Renewable electricity"** means electricity generated by burning fossil fuels, biogas, biomass, or waste, and electricity generated through a process that creates radioactive waste; **"Real benefits"** mean cash, other forms of monetary payment or grants, real-estate, or low interest loans with repayment periods no less than thirty years; **''Commission''** means the Federal Renewable Energy Commission; a **"Just transition energy project"** means the installation and operation of a system of Clean renewable electricity generating, storing, and distributing infrastructure by any entity regardless of whether that entity is subject to Commission jurisdiction; **''Environmental justice''** means the fair treatment and meaningful involvement of all people regardless of race, color, culture, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies to ensure that each person enjoys the same degree of protection from environmental and health hazards; and equal access to any Federal agency action on environmental justice issues in order to have a healthy environment in which to live, learn, work, and recreate; **"Environmental justice community"** means a community with significant representation of communities of color, low-income communities, or Tribal and Indigenous communities, that experiences, or is at risk of experiencing higher or more adverse human health or environmental effects or is located nearest to an existing area of significant environmental pollution and degradation, or bears a burden of negative public health effects from pollution, or includes 1 or more sites of a facility that is a part of a polluting industry or waste dump or a facility for fossil resource extraction, or experiences a

high incidence of climate change impacts and disasters, or has been excluded or harmed by racist or discriminatory policies that have resulted in disproportionate burdens of environmental pollution and related health and socioeconomic disparities, or has a land-based or food subsistence culture that is experiencing ecosystem disruption and devastation, or faces relocation and resettlement resulting from climate change or impacts to the environment and ecosystems; **''Community of color''** means a geographically distinct area in which the population of any of the following categories of individuals is higher than the average population of that category for the State in which the community is located: Black, African American, Asian, Pacific Islander, Other non-White race, Hispanic, Latinx, Linguistically isolated; **''Fair treatment''** means the conduct of a program, policy, practice, or activity by a Federal agency in a manner that ensures that no group of individuals (including racial, ethnic, or socioeconomic groups) experience a disproportionate burden of adverse human health or environmental effects resulting from such program, policy, practice, or activity, as determined through consultation with, and with the meaningful participation of, individuals from the communities affected by a program, policy, practice, or activity of a Federal agency; **"Low-income community''** means any census block group in which 30 percent or more of the population are individuals with an annual household income equal to, or less than, the greater of—(A) an amount equal to 80 percent of the median income of the area in which the house hold is located, as reported by the Department of Housing and Urban Development; and (B) 200 percent of the Federal poverty line; **"Stranded electricity assets"** means any Non-renewable electricity energy infrastructure that is obviated or replaced by a Certificate of Just Transition and has unmet financial obligations or unfunded decommissioning requirements.

5. Establishment of the Federal Renewable Energy Commission. The Federal Energy Regulatory Commission shall on July 1, 2023, become the Federal Renewable Energy Commission. All of the Federal Energy Regulatory Commission's statutory responsibilities are hereby transferred to the Federal Renewable Energy Commission.

6. **Clean Renewable Electricity Mandate.** No later than one year after the date of enactment of this Act, the Commission shall establish a Just Transition Date by which all electricity sold in interstate commerce shall be Clean renewable electricity unless the electricity is generated at a facility that holds a Clean Renewable Electricity Exception Permit. The Just Transition Date shall be no earlier than January 1, 2025 and no later than January 1, 2030. The Commission shall issue a Certificate of Just Transition to each Clean Renewable electricity generating facility or just transition energy project placed in service on or before the Just Transition Date. The Commission shall also issue Clean Renewable Electricity Exception Permits to Non-Renewable electricity generating facilities or a period not to exceed 10 years past the Just Transition Date. The Commission must prepare Environmental Impact Statement (EIS) and a Community Impact Report before issuing a Certificate of Just Transition or a Clean Renewable Electricity Exception Permit. Community Impact Reports shall assess the degree to which a proposed Federal action affecting a community will cause multiple or cumulative exposure to human health and environmental hazards that influence, exacerbate, or contribute to adverse health outcomes; and assess relevant public health data and industry data concerning the potential for multiple or cumulative exposure to human health or environmental hazards in the area of the community and historical patterns of exposure to environmental hazards; and assess the impact of such proposed Federal action on such community's ability to access public parks, outdoor spaces, and public recreation opportunities; and evaluate alternatives to or mitigation measures for the proposed Federal action that will (A) eliminate or reduce any identified exposure to human health and environmental hazards to a level that is reasonably expected to avoid human health impacts in communities and (B) not negatively impact a community's ability to access public parks, outdoor spaces, and public recreation opportunities; and analyze any alternative developed by members of an affected community that meets the purpose and need of the proposed action. The Commission shall not delegate responsibility for the preparation of a Community Impact Report to any other entity.

7. Just Transition. Certificates of Just Transition shall replace an explicit amount of Non-Renewable interstate electricity from an explicit source with Clean Renewable electricity through the completion of one or more Just transition energy projects and shall be planned, approved, implemented, and operated with Fair treatment of Energy Justice communities, Low-income communities, Indigenous tribes or nations, and other communities. The holder(s) of a Certificate of Just Transition may be any individual or entity and shall be eligible for all incentives (loans, grants, and credits) made available pursuant to, but not limited to, the Inflation Reduction Act, the Energy Policy Act of 2005, and the Infrastructure Investment and Jobs Act. Fifty percent of all Real benefits resulting from Just transition energy projects must be directed to Environmental Justice communities, and/or low income communities, and/or indigenous tribes or nations. The Commission shall in the case of several applications for a Certificate of Just Transition proposed to replace the same amount and source of Non-Renewable interstate electricity award a certificate to one or more competing applicants based on the following priority: applications sponsored entirely by an Environmental Justice community, low-income community, or indigenous tribe or nation; applications sponsored by multiple entities where an Environmental Justice community, low-income community, or indigenous tribe or nation has a fifty percent or greater controlling interest in the proposed Just transition energy project(s); applications for which an Environmental Justice community, low-income community, or indigenous tribe or nation will receive more than fifty percent of all Real benefits from proposed Just transition energy projects (with more priority assigned to higher percentages of benefits received by an Environmental Justice community, low-income community, or indigenous tribe or nation). The costs for retiring Stranded electricity assets resulting from replacing explicit amounts of Non-Renewable interstate electricity from explicit sources shall be entirely paid for by the investors in those same Stranded electricity assets. Certificates of Just Transition shall include Abandonment Risk Mitigation Plans which account for the safe abandonment of Non-Renewable electricity in the certificate. The Commission shall require jurisdictional transmission providers to give interconnection priority to Just transition energy projects for Certificates of Just Transition over all pending interconnection projects, with the exception of those projects specifically purposed to increase safety and reliability.

8. **Exceptions.** Clean Renewable Electricity Exception Permits shall include a specific timetable for the amount of non-clean renewable electricity from an explicit source to retire at a point in time after the Just Transition Date, but not to exceed ten years after the Just Transition Date. An applicant for a Clean Renewable Electricity Exception Permit must demonstrate there is an absence of reasonable alternatives for meeting the demand for electricity at just and reasonable rates.

9. Eminent Domain. Notwithstanding the provisions of the Natural Gas Act, the issuance, after the date of enactment of this Act, of a certificate pursuant to Section 7 of the Natural Gas Act or a permit issued pursuant to Section 3 shall not confer on the project developer or any other entity eminent domain authority.

10. **Status for Environmental Justice Communities, Low-Income Communities, and Indigenous Tribes and Nations.** As of the enactment of this Act and forever more, Environmental Justice communities, Low-income communities, and Indigenous Tribes and nations shall have, with no further action required on their part, intervenor status in all open Commission proceedings. Communications between Environmental Justice communities, Low-income communities, and Indigenous Tribes and nations and the Commission shall not be subject to Commission ex parte regulations. All Commission filing fees and annual charges shall be waived for Environmental Justice communities, Low-income communities, and Indigenous Tribes and nations. The Commission shall prepare an Environmental Impact Statement and a Community Impact Report before approving any license, certificate, or permit

that impacts Environmental Justice communities, Low-income communities, Indigenous Tribes, or other communities.

11. Methane or Natural Gas Exports. Beginning one year after the enactment of this Act, exports of natural gas produced in the United States shall be capped at the level of such exports in the prior year. The cap shall be reduced by ten percent in each subsequent calendar year until the twelfth year after the date of enactment, at which time all exports of natural gas shall be prohibited.

12. **Public Participation.** The Commission shall employ a Community and Public Facilitator and offer commensurate support resources for each state and territory with a state utility regulatory commission, each region served by a regional transmission operator, and every Indigenous Tribe or Nation public utility commission, and every Indigenous Tribe or Nation energy authority. The Community and Public Facilitators shall facilitate community and public participation by engaging and frequently meeting with communities and members of the public to: communicate local, state, and federal interstate electricity siting participation procedures and electric grid technical information and complete context; cooperatively identify potential interstate electricity projects; and communicate independent and accurate information about proposed interstate electricity projects and alternatives. The Community and Public Facilitators shall periodically communicate the amount, cost, and provenance (source of generation and method of distribution) of each Clean Renewable and Non-Renewable electricity facility. The Community and Public Facilitators shall award grants to community members and members of the public for participating in any interstate electricity siting process. Awarded grants shall not be conditioned on the outcome of a particular or a set of siting procedures and shall not be restricted from being used to seek relief and redress. One or more Community and Public Facilitators shall participate in every public meeting of the Commission specifically to facilitate sixty minutes of Open Public Discussion between community members, the public, and the Commission about any jurisdictional Commission matter or proceeding. One or more Community and Public Facilitators and two or more Commissioners shall participate in an Open Public Energy Forum once each and every month for no less than six hours on a given day. Neither the Open Public Discussion portions of Commission monthly open meetings nor the Open Public Energy Forum shall be subject to or constrained by Commission ex parte regulations. The Community and Public Facilitators shall continuously identify community and public information requirements and provide transparent access to public information in custody of the Commission using Federal Government best practices for data management and open data.

13. Retail Electricity Billing Transition Information. Title I Subtitle B of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.) is amended by adding after section 111 (d) (19) the following: (20) Retail electricity consumers shall, on a monthly basis, be informed of the percentage the electricity they consume that is Clean renewable electricity and the percentage of the electricity they consume that is Non-renewable electricity.

14. **Regulatory Independence.** No later than two years after the enactment date of this Act the Commission shall be funded through general appropriations not offset by Commission fees and charges. On a semi-annual basis beginning six months after the enactment date of this Act the Commission Office of Public Participation shall issue a report to Congress providing detailed and summary information regarding the real participants in Commission proceedings, the outcomes of their petitions or positions, the number and duration of staff communications with those participants, and resources provided to those participants by the Office of Public Participation and other staff. On a semi-annual basis beginning six months after the enactment date of this Act the Commission Office of Public Participation shall issue a report to the President and Congress identifying Commissioner nominee candidates who would improve Commission diversity regarding racial, tribal, and economic background and interstate electricity production and consumption experience. On an annual basis beginning six months after the

enactment date of this Act the Commission shall issue a report to Congress identifying U.S. Defense Department use of Non-Renewable and Clean Renewable electricity, including detailed and summary information regarding military unit function and geographic location and including the use of methane or natural gas exported from the United States. There are hereby appropriated $< > to the Commission to plan and implement this Act, $< > to the Commission to increase by three times for a period of no more than ten years the amount of resources for interstate electricity project (Clean Renewable electricity and Non-Renewable electricity) construction oversight and enforcement, $< > to the Commission to increase by three times for a period of no more than ten years the number of staff and the amount of resources for interstate electricity project (Clean Renewable electricity and Non-Renewable electricity) technical consultation from Commission technical staff directly to the public facilitated by the Office of Public Participation, and $< > to the Treasury to provide additional incentives for Certificates of Just Transition.

HB0505 - SB434 - Testimony ENERGIZE _Unfavorable.p
Uploaded by: Dave Arndt
Position: UNF

Dear Mr. Chair and Committee Members:

Thank you for reading my testimony today in strong opposition to **HB0505/SB434**

My name is Dave Arndt, a Baltimore resident, a chemical engineer and a retiree of NIH.

Maryland's clean energy ambitions are crumbling under the weight of policy missteps. These missteps are having a dramatic negative effect on ratepayers and achieving our RPS and Climate Solutions Now goals. While the ENERGIZE Act recognizes these issues, it does not implement any changes that will positively negate our policy missteps.

Nuclear power will not address the immediate need to reduce energy bills and address resource adequacy. In December 2024, the MEA Energy Report indicates that MEA does not think it is feasible to build any new reactors by 2035, furthermore they do not say when they believe it would be feasible to build the modeled number of gigawatts needed to support this bill's new energy requirements.

- The last nuclear power plants completed in the US were the Vogtle Units 3 & 4 in Georgia. They took 15 years to build and cost $36.8 billion, more than twice the projected timeline and cost. They provide ratepayers the most expensive electricity in the world at $10,784/KW. Normal (wind and solar) generation prices range from $1,000 to $1500/KW.
- In South Carolina, their nuclear project was halted in 2017 "following years of extensive and costly delays and then bankruptcy by its contractor," Santee Cooper said. At that point, Santee Cooper and South Carolina Gas and Electric (now a part of Dominion Energy) had already poured $9 billion into the project. Santee Cooper and Dominion customers have been paying for those costs, even though the units haven't been in operation.
- SMRs are getting all press and attention however, they are too expensive, too slow and too risky.
    - The TerraPower project likes to claim; "They've recently broken ground on the only new nuclear reactor that's currently under construction in the United States." That is just completely false. TerraPower has NOT begun construction on its Natrium reactor. It doesn't even have a construction permit from the Nuclear Regulatory Commission, and it won't until 2026, at the earliest. The company broke ground on a test facility for developing the liquid sodium coolant that the reactor will use.
    - The NuScale project in Idaho was canceled BEFORE construction began. Initially cost estimates where $3B, however they rose to $9.6B and the project has been shelved.
    - Even if the unlikely rollout of SMRs eventually happens, it will unfold too late to curb the climate crisis.
    - Three Arizona's three largest utilities are collaborating to build an SMR, they a say SMRs could be operating by the early 2040s if permits and financing fall into place. How will this solve our energy issues today or even the next two decades?

- SMRs cannot be counted on to provide reliable and resilient off-the-grid power for facilities such as data centers. It very likely will take decades of operating experience for any new reactor design to achieve the level of reliability characteristic of the operating light-water reactor fleet. Premature deployment based on unrealistic performance expectations could prove extremely costly for any company that wants to experiment with SMRs.
- And finally, we hear the ideal place to locate SMRs is close to the energy user, therefore saving costs on installing transmission and distribution lines. The ideal client is a data centers. Where are the proposed new data centers in Maryland? Frederick County, Montgomery County and Prince Georges County, are they ok with have SMRs close to residents? Also, the generally planned size for such SMRs is between 50 and 80 MW. That means, assuming 80 MW size, the Landover data center site with a projected power need of 820 MW would require at least 10 SMRs, and the Frederick data center site would require 17 SMRs. Remember that all nuclear spent materails would also have to be stored on site.

- Overall, we have to look the opportunity cost of relying on nuclear power.
  - Solar is far cheaper and safer. Lazard, a financial firm, estimated that the unsubsidized levelized cost of electricity from new nuclear plants in the U.S. will be between $141 and $221 per megawatt hour. By comparison, a newly constructed utility-scale solar facility with some storage to provide power after the sun sets will produce power at an unsubsidized levelized cost of between $46 and $102 per megawatt hour. Costs for these technologies have been trending in opposite directions: nuclear is going up whereas solar and batteries have become cheaper and are expected to decline further.
  - Batteries technology is changing dramatically, Texas, California and Europe are implementing solutions today.

It is premature to offer long-term and extremely expensive nuclear energy solutions without conducting the integrated energy resource planning envisioned in SB909 Energy Resource Adequacy and Planning Act. There are also more expeditious and lower cost solutions, such as those proposed in SB316 the Abundant Affordable Clean Energy Act.

This bill is a step backwards in meeting our goals.

For all of these reasons, I strongly oppose HB0505/SB434 and urge a **UNFAVORABLE** report.
Thank you,

Dave Arndt

Testimony DAC Energize SB434.pdf
Uploaded by: Debbie Cohn
Position: UNF

Committee: **Education, Energy and the Environment**
Testimony on: **SB434 – ENERGIZE Act**
Submitting: **Deborah A. Cohn**
Position: **Unfavorable**
Hearing Date: **February 20, 2025**

Dear Chair and Committee Members:

Thank you for allowing my testimony today on SB434.

I appreciate that SB434 affirms the state goal of achieving 100% clean electricity and is intended to address the need for electric energy reliability and the significant increase in utility rates that ratepayers are experiencing.

Ensuring electric energy reliability at reasonable rates is both a near term (1-3 years) and longer term challenge. SB434 does not offer near-term solutions which other bills address. When addressing long term reliability, SB434 does not adequately take into account certain solutions that could provide long-term reliability at lower costs while also avoiding fossil fuel emissions.

Other bills and policies offer no-regrets solutions more likely to result in cost effective near-term and long-term reliability improvements while also allowing Maryland to reduce greenhouse gas emissions. These include, for example, (i) incentives and procurements for utility scale battery storage and utility scale and community solar, (ii) opportunities for low income ratepayers in one utility's service area to subscribe to community solar in another utility's service area, and (iii) more efficient utilization of the existing grid through grid enhancing technologies and reconductoring. These types of provisions need to be enacted this year.

SB434 proposes to add nuclear energy to the renewable portfolio standard and create a procurement policy and structure for new nuclear generation without providing for an actual procurement. Small modular reactors may well be able to contribute to a long-term solution to increasing reliability of the electric energy supply, but before moving in this direction we need to ask two questions:

- In the time it would take to bring on new nuclear energy, can we construct or access sufficient industrial scale storage capacity to provide us equivalent reliability at a lower cost and without the risks entailed in long-term on-site storage of spent nuclear fuel?
- Second, are we willing to store spent nuclear fuel indefinitely in our own neighborhoods, and if not, can we ethically impose that risk on anyone else?

Time and Cost of New Nuclear Power: New traditional nuclear power plants likely will not bring new generation to Maryland for years if not decades. The Georgia Power Vogtle Units 3

and 4 took 15 years to build and cost $36.8 billion, more than twice the project timeline and cost.[1] Indeed, a 2014 academic study[2] looked at 401 electricity projects around the world, including 180 traditional nuclear power projects. It found that 175 of the traditional nuclear projects exceeded the initial budget by an average of 117% and took, on average, 64 percent longer to build than estimated, making traditional nuclear reactors the riskiest technology in terms of mean cost escalation as a percentage of budget and frequency. Small nuclear reactors have not fared better in terms of time or cost. The Utah Associated Municipal Power Systems NuScale Power small modular nuclear reactor project was initially projected to cost $3 billion and ultimately rose to $9.6 billion at which point the project was shelved.[3]

Solar power can now be produced for one-third the cost of nuclear energy[4] and, when coupled with industrial-scale, thermal energy storage for at least 10 and up to several hundred hours, can provide low cost, reliable electric power. Recent developments permit use of off-peak, low-price electricity to super heat salt, rocks or concrete, with the stored heat being converted as needed to release electricity to the grid. A storage facility using sand, the lowest cost alternative, would cost only $4-10 per kWh of capacity, significantly less than a lithium-ion battery, and would, thus, add only a trivial amount to the cost per kWh delivered to users.[5]

Integrated Resource Planning Should Precede Proposed High Cost and Technologically Risky Solutions: It seems premature to offer long-term and extremely expensive nuclear energy solutions without conducting the integrated energy resource planning envisioned in SB909/HB1037 Energy Resource Adequacy and Planning Act and expressly considering newer technologies for long-duration energy storage. More reliable and lower cost solutions, such as those proposed in HB398/SB316 the Abundant Affordable Clean Energy Act, HB1233/SB1022 Community Solar Energy Generating Systems – Subscription Eligibility, HB1225/SB908 Public Utilities – Electric Distribution System Plans- Establishment (Affordable Grid Act), and HB829 Public Utilities-Transmission Lines-Advanced Transmission Technologies, and developing long-duration industrial scale storage technologies, may be available.

For these reasons, I urge an **UNFAVORABLE** report in Committee.

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[1] https://thirdact.org/georgia/2024/06/09/plant-vogtle-the-true-cost-of-nuclear-power-in-the-u-s/; https://www.nonukesyall.org/pdfs/Truth%20about%20Vogtle%20report%20May%2030%20release.pdf

[2] Sovacool, Gilbert and Nugent, "Risk, Innovation, Electricity Infrastructure and Construction Cost Overruns: Testing Six Hypotheses," https://www.sciencedirect.com/science/article/abs/pii/S0360544214008925

[3] https://www.utilitydive.com/news/nuscale-uamps-project-small-modular-reactor-ramanasmr-/705717/

[4] https://www.lazard.com/media/xemfey0k/lazards-lcoeplus-june-2024-_vf.pdf

[5] "Solution to Energy Storage May Be Beneath Your Feet" (March 28, 2024), National Renewable Energy Laboratory (NREL) https://www.nrel.gov/news/features/2024/solution-to-energy-storage-may-be-beneath-your-feet.html

SB434_MDP_UNF_ENERGIZE.pdf
Uploaded by: Emily Scarr
Position: UNF

Maryland PIRG

SB434/HB505: Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act
Education, Energy, and the Environment
February 20th, 2025
Unfavorable

Maryland PIRG is a state based, small donor funded public interest advocacy organization with grassroots members across the state. We work to find common ground around common sense solutions that will help ensure a healthier, safer, more secure future

Maryland's reliance on polluting fuels puts our health and safety at risk. Supporting the growth of cleaner technologies in Maryland benefits both our environment and ratepayers. We thank Governor Moore for his commitment to clean energy generation, but think SB434 falls short. We hope the Committee will move stand-alone bills forward to clean up the RPS, address renewable energy siting, strengthen the grid, and expand energy storage.

The ENERGIZE Act aims to reach 100% clean energy generation by changing the state's Renewable Portfolio Standard and expanding Maryland's reliance on nuclear power. Economically risky at best, investing in and relying on nuclear undermines our efforts to address climate change and provide safe, affordable energy for Marylanders. Despite industry efforts to frame nuclear energy as the cheapest option, the reality is that nuclear power's very survival has required large and continuous government support in the form of subsidies; zero-risk, government loans; and taxpayer liability for nuclear disasters and high-level radioactive waste. Marylanders already bailed out Calvert Cliffs twenty-five years ago, to the tune of nearly $1 billion, after the legislature passed the Electric Customer Choice and Competition Act of 1999.

Last year, Georgia finished building the first new nuclear reactor in the U.S. in decades for more than $35 billion - $17 billion more than initially estimated. Georgia Power will likely profit off the overspending, all of which ratepayers are likely on the hook for. Ratepayers' bills have already gone up to pay for it and they'll be paying the astronomical cost for decades to come. While one may hope the modular reactors will have a different outcome, the time and money to test, build and license them would be better invested in alternatives like energy efficiency, energy storage, wind and solar power. No modular reactors have been built in the U.S., and few have been built worldwide, so it would be unwise to build our state's energy strategy around them.

Per dollar of investment, clean energy solutions – such as energy efficiency and renewable resources – deliver far more energy than nuclear power, and can come online faster and with less risk.

While we appreciate language in this bill intended to mitigate ratepayer risks, our concerns remain that whether it's old reactors or new modular reactors, every credit we give, or dollars we spend propping up nuclear power is a dollar we can't spend on the transition to clean, safe, and affordable energy for Maryland.

We recommend an unfavorable report.

ECA testimony on SB0434 ENERGIZE.pdf
Uploaded by: Frances Stewart
Position: UNF

SB0434 - UNFAVORABLE
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SB0434 – The ENERGIZE Act

Meeting of the Education, Energy, and the Environment Committee

February 20, 2025

Dear Chair Feldman, Vice Chair Kagan, and Members of the Education, Energy, and the Environment Committee, on behalf of Elders Climate Action Maryland, I urge a favorable report on SB

Elders Climate Action is a nationwide organization devoted to ensuring that our children, grandchildren, and future generations have a world in which they can thrive. The Maryland Chapter has members across the state.

We applaud Governor Moore's commitment to 100% clean energy by 2035, and we share that goal. Unfortunately, we have concerns about this bill that do not allow us to support it.

The energy situation in Maryland is a matter of great concern because of increasing demand for electricity from data centers and other uses and rising costs for ratepayers. But it also a very fluid situation. The number and size of data centers that may come to Maryland is unknown. Innovations like DeepSeek and improved demand management make their power needs difficult to estimate. A data center study such as the one proposed in SB0116, the Data Center Impact Analysis and Report, would help to clarify those issues.

Also, we are lacking a clear picture of what can be done to improve Maryland's electrical system while meeting the essential goals we committed to in the Climate Solutions Now Act. Adding new nuclear energy to our grid is the most expensive

way to increase generation, and a nuclear plant that starts the planning process today may not be online by 2035. There are hopes that new small modular nuclear reactors will be less expensive and more quickly built, but none are yet in commercial use.

There are other options that need to be fully considered before we commit to new nuclear power in Maryland. Those include increased solar generation, increased storage, demand management, and virtual power plants.

A study like the one proposed in SB0909, the Energy Resource Adequacy and Planning Act, would be very helpful in clarifying the potential role of nuclear energy and other key issues in Maryland's energy future.

But we shouldn't wait for the study to begin to address these important issues. SB0316, the Abundant, Affordable, Clean Energy Act, offers a no-regrets strategy Maryland can pursue while doing further analysis and planning. The storage provisions and changes to SRECs are particularly important.

For all of these reasons, we urge an unfavorable report on SB0434.

Thank you.

SB434_ENERGIZE Act_Oppose FWW & Groups.pdf
Uploaded by: Jorge Aguilar
Position: UNF

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foodandwaterwatch.org

Oppose SB 434
Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission
(ENERGIZE) Act of 2025
February 20, 2025
Education, Energy, and the Environment Committee

We, the undersigned organizations, are submitting this testimony in opposition to major provisions in the ENERGIZE Act (SB434/ HB505) that seek to promote and subsidize nuclear energy in Maryland. The inclusion of new rules for the procurement and permitting of new nuclear reactors in our state will undermine Maryland's transition to an efficient, economical and a truly clean energy system.

While state leaders have regularly talked about reaching 100% clean energy by 2035, the ENERGIZE Act seeks to remake the state's renewables program by now counting dangerous, dirty and expensive nuclear energy as a form of 'clean energy.'

This new accounting trick would allow electricity from the existing nuclear reactors at Calvert Cliffs to count towards the state's 100% clean energy goals and disincentivize the investments and resources needed for true renewables like wind and solar.

Maryland legislators should make sure that Calvert Cliffs---a facility which is now almost 50 years old and could have a planned or unplanned retirement in the future---is not a central piece of the state's clean energy goals nor that the facility receive subsidizes in the years ahead due to being uncompetitive in the market. The levelized capital costs of electricity production of nuclear is three times the cost of solar.

Worse yet, the largest section in the ENERGIZE Act deals with new rules to promote the buildout of new nuclear reactors in the state of Maryland. Building out these new reactors is going to be more expensive than simply continuing to build out wind and solar, and will ultimately cost Maryland ratepayers billions. Last year, Georgia finished building the first new nuclear reactors in the U.S. in decades for $36.8 billion. The facility cost $22 billion more than initially estimated. Ratepayers' bills have already gone up to pay for it and they'll be paying the astronomical cost for decades to come.

It's also not clear why Maryland should pursue this plan given that the experts have acknowledged that new nuclear facilities would not likely be available for many years. In truth, it takes more than a decade to plan and build new nuclear power plants; completion of the new Georgia Vogtle reactors took 18 years from when they were first proposed.

Perhaps the most problematic part of the ENERGIZE Act is a short "community benefits" portion of the legislation that deals with how to build out the facilities fairly. But the section says nothing about the process by which the state would choose the locations of these new facilities,

how communities would be consulted, the risk assessment of negative environmental and social impacts, nor how the state would ensure that environmental justice principles would be factored in to protect the most vulnerable communities where these type of dangerous facilities usually end up. Experts warn that new nuclear facilities in Maryland will also necessitate new hazardous material and emergency planning programs in Maryland communities to deal with the long-lived radioactive and toxic waste from these facilities. The bill does not provide any acknowledgment, planning, or protections for Maryland's communities for these potentially dangerous new nuclear reactors.

For all these reasons, we urge you to oppose these provisions in the ENERGIZE Act and any bill that promotes more nuclear power in our state. Nuclear energy should have no place in our state's plans to move towards 100% clean energy.

Whether it's old nuclear plants or new ones, every credit we give or dollar we spend propping up the energy of our past is a dollar we can't spend on the transition to a clean, safe and affordable energy economy.

Signed,

Beyond Nuclear

Chesapeake Physicians for Social Responsibility

Climate Communication Coalition

Echotopia, LLC

Food & Water Watch

HoCo Climate Action

Maryland Legislative Coalition

Mountain Maryland Movement

Nuclear Information and Resource Service

Potomac Riverkeeper Network

Waterkeepers Chesapeake

SB434_ENERGIZE Act_EEE_CJW UNFAV.pdf
Uploaded by: Laurie McGilvray
Position: UNF

Committee: **Education, Energy and the Environment**
Testimony on: **SB0434 – ENERGIZE Act**
Organization: **Maryland Legislative Coalition Climate Justice Wing**
Submitting: **Laurie McGilvray, Co-Chair**
Position: **Unfavorable**
Hearing Date: **February 20, 2024**

Dear Chair and Committee Members:

Thank you for allowing our testimony today on SB434. The Maryland Legislative Coalition (MLC) Climate Justice Wing, a statewide coalition of nearly 30 grassroots and professional organizations respectfully urges you to vote unfavorably on SB434.

We appreciate that SB434 affirms the state goal of achieving 100% clean electricity and is intended to address the need for energy reliability and the significant increase in utility rates that are unnerving ratepayers in Maryland today. These are important issues to address.

However, we believe the solutions proposed in SB434 will not result in greater energy reliability in the timeframe needed (1-2 years) and will increase rather than lower electric rates in Maryland. We also believe SB434 does not adequately take into account solutions to provide long-term energy reliability at lower cost to ratepayers. In contrast, we support several other bills and policies that offer no-regrets solutions more likely to result in near-term (and long-term) reliability improvements at lower costs, while also allowing Maryland to reduce greenhouse gas emissions. Examples of these policies include incentives for utility scale battery storage and solar (both utility scale and community solar) and getting more out of the grid we have through grid enhancing technologies and reconductoring.

The proposed provisions in SB434 to add nuclear energy to the renewable portfolio standard and implement a procurement structure for new nuclear generation will not bring new generation to Maryland for years if not decades, and could actually undermine the state's transition to efficient and economical renewable energy. The Georgia Power Vogtle Units 3 and 4 took 15 years to build and cost $36.8 billion, more than twice the project timeline and cost (see costs for Georgia nuclear plant). The Utah Associated Municipal Power Systems NuScale Power small modular nuclear reactor project was initially projected to cost $3 billion and ultimately rose to $9.6 billion, at which point the project was shelved. Furthermore, a 2014 academic study looked at 180 nuclear power projects around the world and found 175 of them exceeded the initial budget

by an average of 117% and took, on average, 64% longer to build. The levelized capital cost of electricity production of nuclear is three times the cost of solar.

It also seems premature to offer long-term and extremely expensive nuclear energy solutions without conducting the integrated energy resource planning envisioned in SB909 Energy Resource Adequacy and Planning Act. We believe there are more expeditious and lower cost solutions, such as those proposed in SB316/HB398 Abundant Affordable Clean Energy Act and SB908/HB1225 Affordable Grid Act, which should be enacted this year.

For these reasons, the MLC Climate Justice Wing respectfully urges an **UNFAVORABLE** report in Committee.

350MoCo
Adat Shalom Climate Action
Cedar Lane Unitarian Universalist Church Environmental Justice Ministry
Chesapeake Earth Holders
Climate Parents of Prince George's
Climate Reality Project
ClimateXChange – Rebuild Maryland Coalition
Coming Clean Network, Union of Concerned Scientists
DoTheMostGood Montgomery County
Echotopia
Elders Climate Action
Fix Maryland Rail
Glen Echo Heights Mobilization
Greenbelt Climate Action Network
HoCoClimateAction
IndivisibleHoCoMD
Maryland Legislative Coalition
Mobilize Frederick
Montgomery County Faith Alliance for Climate Solutions
Montgomery Countryside Alliance
Mountain Maryland Movement
Nuclear Information & Resource Service
Progressive Maryland
Safe & Healthy Playing Fields
Takoma Park Mobilization Environment Committee
The Climate Mobilization MoCo Chapter
Unitarian Universalist Legislative Ministry of Maryland
WISE

SB0434_Energize MD_UNFAVORABLE_ClimateCC.pdf
Uploaded by: Sonia Demiray
Position: UNF

SB0434 - UNFAVORABLE

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Unfavorable- SB0434 - Empowering New Energy Resources and Green Initiatives toward a Zero-Emissions (ENERGIZE) Maryland Act

Education, Energy, and the Environment Committee
February 20, 2025

Dear Chair Feldman, Vice Chair Kagan, and Members of the Education, Energy, and the Environment Committee:

My name is Sonia Demiray. I am the Executive Director of the Climate Communications Coalition, a member of the Mid-Atlantic Justice Coalition, and of the Maryland Climate Justice Wing. The Climate Communications Coalition strongly opposes SB0434.

The Energize Maryland Act, proposes to expand current Renewable Portfolio Standard (RPS), to 75% of energy generated by 2030 with 50% coming from Tier 1 renewable sources which include highly polluting trash incineration, woody biomass combustion, and biogas combustion. But SB0434 changes the name of these dirty sources to "clean." This is greenwashing. Simply changing the name of the renewable portfolio standard to "clean energy portfolio standard" and pretending that we're doing what is required to reduce our emissions is dishonest and misleading.

As of January 25, 2025, the average level of carbon dioxide (CO2) in the atmosphere was 423.3 parts per million (ppm), up from 280 ppm from pre-industrial revolution. Why should we care? Because these greenhouse gases cause deadly and costly climate disasters. The U.S. had over 27 weather/climate disasters that each exceeded $1 billion in costs last year. Just because we have not had such a disaster in Maryland doesn't mean it can't happen. The number of extreme events will continue to grow until we eliminate our greenhouse gas emissions and then continue to remove accumulated greenhouse gases from the atmosphere. Maryland must do its part.

If passed, SB0010 would finally remove one dirty source, trash incineration, from the Tier 1 this year. This bill, however, keeps the combustion of woody biomass and biogas, both equally or more polluting as coal and methane respectively.

- Burning woody biomass releases 150% the CO2 of coal and 300-400% the CO2 of natural gas, per unit of energy produced. It is more polluting and less efficient than coal. In addition, it removes vital carbon sequestration potential from our forests and releases cancer-causing and immune system- damaging benzene, dioxins, carbon monoxide, formaldehyde, and nitrogen oxides amongst other chemicals.

- Biogas is primarily methane (CH4) the same as "natural" gas which is 80 times more potent in trapping heat than CO2 in the first 20 years after its release, a critical time for emissions reduction. In addition, even biomethane, a purified version form of biogas, has been shown to be more toxic to humans than regular methane.

Continuing with all current Tier 1 RPS sources does not provide clean energy nor will it keep warming temperatures below 2º C (we have already surpassed 1.5º C).

Adding nuclear energy into the mix of "clean" sources is also wrong. Nuclear power plants, no matter what size, generate radioactive waste, a hazardous byproduct that no Marylander wants and nuclear installations have the potential for creating environmental catastrophes – more so now with extreme weather events.

In addition, incinerators, logging sites, pellet factories, thermal plants, biomass burning power plants, and biogas digesters are disproportionately placed amidst low income, underserved, and already overburdened communities, further impacting the most vulnerable among us.

If Maryland wants to keep and expand the RPS system, it needs to remove trash incineration, biogas combustion, and woody biomass combustion from the "Tier 1 Renewables" - a misnomer in itself since "Renewable Energy" as defined by the U.N., is energy derived from natural sources that are replenished at a higher rate than they are consumed. Neither trash, woody biomass, nor biogas are therefore renewable. Nuclear is not clean. The only clean and renewable sources are solar, wind, and geothermal and should be the only ones in the RPS or "Clean Energy" Portfolio Standard.

Time is running out. We have to eliminate emissions, not pretend that we're taking the action needed by renaming dirty sources "clean." We urge an unfavorable report on SB0434.

Thank you.

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SB0434_NIRS_UNFAV.pdf
Uploaded by: Timothy Judson
Position: UNF

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Committee: **Education, Energy, and the Environment**
Testimony on: **SB0434 – ENERGIZE Act**
Organization: **Nuclear Information and Resource Service**
Submitting: **Timothy Judson, Executive Director**
Position: **Unfavorable**
Hearing Date: **February 20, 2025**

The ENERGIZE Act would create a process for constructing new commercial nuclear power reactors in Maryland. The mechanism through which it would do so is similar to the process the state has promulgated for offshore wind generation: a procurement and rate-setting process run by the Public Service Commission. The bill includes one provision that would *appear* to mitigate the possibility that the enormous cost overruns that are the norm in nuclear reactor construction from being borne by Maryland residents and businesses. Unfortunately, however, it would still leave Marylanders vulnerable to higher electricity costs resulting from nuclear plant cost escalation. Specifically, the ENERGIZE Act would prevent utility customers from paying nuclear construction costs until the reactor is generating power, but it would not prevent the PSC from raising the approved project cost, as state utility regulators usually have.

There are unique aspects of nuclear power plant projects and the role that politics plays in regulatory oversight and ratemaking which routinely override intended protections set forth in policy. Reactor developers typically provide unrealistically low cost estimates to state regulators in order to win approval to start construction. It is rarely clear whether the submission of inaccurate cost estimates is deliberate or due to error, but if accurate cost estimates were provided to regulators initially, it is likely that utility regulators would not be able to justify giving them the initial green light. Due to the lack of comparable projects by which to evaluate such cost projections, and the high degree of specialization involved in nuclear reactor technologies, it is difficult for regulatory staff to subject nuclear construction budgets to rigorous auditing and, therefore, for Commissions to challenge their accuracy. In short, regulators are forced to take the developers' word for it, setting the stage for repeated deference as construction progresses and cost overruns mount.

The long time it takes to build nuclear reactors also creates the conditions for cost overruns to add up incrementally. Unlike wind, solar, and fossil fuel power plants, which can be built in 2-3 years, construction of nuclear reactors typically takes more than 10 years, longer than most PSC commissioners, governors, or General Assembly members are in office. Changes in interest rates, materials prices, regulations, and other factors can impinge on nuclear construction schedules and costs. Once billions of dollars have been spent and hundreds of construction workers have been employed, it becomes politically controversial to cancel a reactor project, even as costs and delays reach levels not contemplated when the project started. Utility regulators have generally approved incremental cost increases for nuclear reactors rather than make the controversial decision to pull the plug on a high-profile project on which billions of dollars have been spent.

Further, the legislation would not solve other problems that make nuclear energy a bad fit for the goals of the ENERGIZE Act: to reduce greenhouse gas emissions, assure affordable electricity costs, and improve grid reliability. In addition to being substantially more expensive than solar and wind generation (including offshore wind), the long construction times and delays endemic to nuclear reactor construction entail significant climate opportunity costs, by assuring continued greenhouse gas emissions. If the state has authorized construction of reactors under the ENERGIZE Act, then it would be obligated to include generation from them in forward energy planning and to ensure there is a market for their electricity. Many other generation sources and energy systems are substantially cheaper, faster, and more reliable than nuclear power plants, but committing to nuclear energy procurements will preclude their development. In addition, the large cost and high level of complexity of overseeing nuclear projects would tie up the PSC's limited capacity, potentially bogging down reviews of renewable energy, storage, and grid infrastructure projects. By requiring the PSC to administer multiple nuclear tenders and potential reactor applications and construction cost reviews, the ENERGIZE Act could, therefore, have collateral climate and economic opportunity costs.

Marylanders would bear additional, long-term, open-ended risks from new nuclear power plants. No other sources of electricity produce intensely radioactive and extremely long-lived wastes that remain hazardous to human health and the environment for hundreds of thousands of years. There are, as yet, no permanent storage facilities for nuclear waste in the U.S., and no timeframe for which there might be. The U.S. Department of Energy is barred from working on development of a permanent geologic repository since Congress certified the now-failed and -abandoned Yucca Mountain Project in Nevada as the country's first such repository. Any high-level radioactive waste produced by new reactors would be likely to remain in Maryland indefinitely. This and other environmental impacts and opportunity costs of nuclear energy are nowhere recognized in the ENERGIZE Act.

Nuclear power plant construction has suffered from high costs and long construction times since it has been deployed at grid scale. There was a brief period in the 1950s and 1960s when, as a marketing strategy, nuclear engineering firms built a handful of early nuclear power plants for utility companies under fixed-cost contracts, through which the engineering firms accepted all of the financial risks. The actual costs of those projects have never been disclosed. But once Westinghouse, General Electric, Babcock & Wilcox, and Construction Engineering began selling their reactors widely, cost escalation became the norm. Through the first generation of nuclear plant construction, 134 nuclear reactors were built and over 120 were canceled, several of which after substantial amounts of construction.[1] Average construction times escalated to more than 14 years,[2] and final construction costs averaged more than three times original estimates; in some cases, cost overruns approached ten times the original budgets.[3] Due to these trends, utilities

[1] Parker, Larry, and Mark Holt. "Nuclear Power: Outlook for New U.S. Reactors." Congressional Research Service. Updated March 9, 2007. https://sgp.fas.org/crs/misc/RL33442.pdf

[2] Barrientos, Carlos J. "Westinghouse PWR: The Rise and Fall of a Dominant Design in the Electric Power Industry." Massachusetts Institute of Technology. June 2002. https://dspace.mit.edu/bitstream/handle/1721.1/39402/53362716-MIT.pdf

[3] Schlissel, David, and Bruce Biewald. *Nuclear Power Plant Construction Costs*. Synapse Energy Economics. July 2008. https://www.synapse-energy.com/sites/default/files/SynapsePaper.2008-07.0.Nuclear-Plant-Construction-Costs.A0022_0.pdf

stopped building new reactors in 1978, the year *before* the reactor meltdown at Three Mile Island.

Recent experience has been no better. After the U.S. Congress enacted energy legislation in 2005 that provided billions of dollars in direct subsidies and low-cost financing, utilities ordered 28 new reactors between 2006 and 2008. Manufacturers promised that new, pre-certified designs would be affordable and fast to build, taking advantage of advanced engineering, standardized designs, passive safety systems, and other features. At least one design, Westinghouse's AP1000, incorporated a modular construction design, consisting of several factory-produced modules that would be assembled at the reactor site. The Nuclear Regulatory Commission issued construction and operating licenses for 14 new reactors, but utilities eventually suspended or withdrew the other 14 applications.[4]

Construction began on only four reactors, two each in Georgia (Vogtle 3&4) and South Carolina (V.C. Summer 2&3), all using the Westinghouse AP1000 design. Construction started on both projects in 2013, and was supposed to take about 4 years to complete. Cost increases and delays began to mount within the first two years. The cost of the Vogtle 3&4 reactors rose by $1 billion in the first 18 months, and by another $1 billion over the following year to $17 billion.[5] However, costs were mounting even faster behind the scenes. After four years of construction, in 2017, Westinghouse declared bankruptcy due to $8 billion in cost overruns on the Vogtle and Summer projects, and it reported that the costs of each had ballooned from $17 billion to $25 billion. Utilities in South Carolina canceled construction of the Summer reactors, but they had already spent $9 billion on the project.[6] Federal prosecutors indicted two executives from Westinghouse and two executives from SCANA Corporation, the majority owner of the project. All four executives were convicted or pleaded guilty.[7] SCANA was later acquired by Dominion Energy to stave off insolvency.[8]

Utilities in Georgia continued the Vogtle project, and costs continued to rise steadily over the remaining eight years of construction, totaling over $36 billion by the time construction was completed in 2024.[9] The project took a total of 18 years from when planning started in 2006, and 15 years to construct. The Georgia Public Service Commission monitored the project throughout,

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[4] U.S. Nuclear Regulatory Commission. "Combined License Applications for New Reactors." U.S. NRC. Updated July 3, 2023. https://www.nrc.gov/reactors/new-reactors/large-lwr/col.html

[5] Kozeracki, Julie, et al. *Pathways to Commercial Liftoff: Advanced Nuclear*. U.S. Department of Energy. September 2024. https://liftoff.energy.gov/wp-content/uploads/2024/10/LIFTOFF_DOE_Advanced-Nuclear_Updated-2.5.25.pdf

[6] Bade, Gavin. "Santee Cooper, SCANA abandon Summer nuclear plant construction." Utility Dive. July 31, 2017. https://www.utilitydive.com/news/santee-cooper-scana-abandon-summer-nuclear-plant-construction/448262/

[7] Brown, Maggie, and Mary Green. "Final defendant in VC Summer 'fiasco' sentenced to year in prison." WIS News 10. Columbia, SC. November 20, 2024. https://www.wistv.com/2024/11/20/final-defendant-vc-summer-fiasco-sentenced-year-prison/

[8] Crees, Alex. "The failed V.C. Summer nuclear project: A timeline." Choose Energy. Updated December 4, 2020. https://www.chooseenergy.com/news/article/failed-v-c-summer-nuclear-project-timeline/

[9] Durand, Patty, Kim Scott, and Glenn Carroll. "Plant Vogtle: The True Cost of Nuclear Power in the United States." GCV Education Fund. Atlanta, GA. May 2024. https://gcvedfund.org/wp-content/uploads/2024/06/Truth-about-Vogtle-report.pdf

with formal review proceedings every six months. PSC staff testified numerous times that they believed the cost and schedule projections filed by the utility, Georgia Power, were inaccurate.[10] Commissioners approved continuation of the project and expressed confidence in the utility, allowing costs to escalate, despite the Public Service staff's conclusion that the "cost increases and schedule delays have completely eliminated any benefit on a lifecycle cost basis."[11]

Similar trends are already evident among the classes of Small Modular Reactors (SMRs) and "advanced" reactors (non-light-water reactors, or non-LWRs). The total cost of individual SMR and non-LWR projects is likely to be lower because each reactor is much smaller than a 1,000+ MW light water reactor (LWR). But they are not likely to be more cost-effective, because the unit cost of generation is likely to be comparable to or greater than large LWRs. As the Institute for Energy Economics and Financial Analysis (IEEFA) reported last year, the projected costs of SMRs and non-LWRs are already approaching the final cost of the Vogtle 3&4 reactors, before any construction has occurred.[12] When the Vogtle reactors began construction, the project's budget was $14 billion for the two 1,117 MW reactors, or $6.3 million per MW; at completion, the $36 billion total cost amounted to $16.1 million per MW (or more than $20 million/MW in 2023 dollars). IEEFA reports that, before even beginning construction, three leading SMR and non-LWR designs for which cost estimates are available are $21.6 million/MW (NuScale), $18.0 million/MW (X-energy), and $12.3 million/MW (GE Hitachi), all far-exceeding the initial cost projections of Vogtle's AP1000 reactors before construction started. The President and CEO of NextEra, one of the largest utility holding companies in the US, has expressed skepticism of SMRs and concerns about their cost:

> *"They are going to be very expensive and then you're going to be taking a bet on the technology," Ketchum said. "Right now, I look at SMRs as an opportunity to lose money in smaller batches."*[13]

[10] Newsome, Tom, et al. "Direct Testimonies and Exhibits of Tom Newsome, Philip Hayet and Lane Kollen." Georgia Public Service Commission Public Interest Advocacy Staff, Before the Georgia Public Service Commission. January 3, 2023. https://services.psc.ga.gov/api/v1/External/Public/Get/Document/DownloadFile/192559/74336

[11] Newsome, Tom, et al. "In the Matter Of: Georgia Power Company's Twenty-Eighth Semi-Annual Vogtle Construction Monitoring ('VCM') Report—Direct Testimony and Exhibits." Georgia Public Service Commission Public Interest Advocacy Staff, Before the Georgia Public Service Commission. June 22, 2023. https://services.psc.ga.gov/api/v1/External/Public/Get/Document/DownloadFile/204891/86214

[12] Schlissel, David, and Dennis Wamsted. "Small Modular Reactors: Still too expensive, too slow and too risky." Institute for Energy Economics and Financial Analysis. Valley City, OH. May 29, 2024. https://ieefa.org/sites/default/files/2024-05/SMRs%20Still%20Too%20Expensive%20Too%20Slow%20Too%20Risky_May%202024.pdf

[13] Sweeney, Darren. "NextEra CEO sees US climate law catalyzing decades of clean energy growth." *S&P Global – Commodity Insights*. October 3, 2022. https://www.spglobal.com/commodity-insights/en/news-research/latest-news/electric-power/100322-nextera-ceo-sees-us-climate-law-catalyzing-decades-of-clean-energy-growth

Construction timelines are also uncertain. No designs for SMRs and non-LWRs have been fully approved, and none are currently under construction. Three demonstration projects for leading SMR and non-LWR designs were originally targeted for completion in 2026, but by 2023 all had been pushed back to 2030 or 2031. Among those three, the project that was furthest into development and licensing, NuScale's Carbon-Free Power Project, was canceled in November 2023 because its cost projection had tripled and NuScale was not able to recruit customers to sign power purchase agreements. X-energy still projects that it will complete its demonstration project in 2030, but it has not yet submitted a construction permit application to the Nuclear Regulatory Commission.[14] The third of the demonstration projects, Terrapower's Natrium in Wyoming, has submitted a construction permit application. If the permit is approved on schedule in 2026, Terrapower would have to complete construction in four years for the reactor to be online in 2030.[15] Construction of first-of-a-kind SMRs in Russia and China has taken three to four times longer than that, at 11-12 years.[16]

Maryland has far better alternatives to the nuclear option in the ENERGIZE Act. The seminal study published in 2016, *Prosperous, Renewable Maryland*, found that our state could transition our energy systems statewide to 100% renewable energy by 2050, at a lower cost and with greater system reliability.[17] If the legislature were to review that study and develop the regulatory

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[14] U.S. NRC. "Pre-Application Activities: Xe-100." U.S. NRC. Updated February 11, 2025. https://www.nrc.gov/reactors/new-reactors/advanced/who-were-working-with/pre-application-activities/xe-100.html

[15] U.S. NRC. "TerraPower, LLC -- Kemmerer Power Station Unit 1 Application Dashboard." U.S. NRC. Updated December 6, 2024. https://www.nrc.gov/reactors/new-reactors/advanced/who-were-working-with/applicant-projects/terrapower/dashboard.html

[16] Schlissel, David, and Dennis Wamsted. "Small Modular Reactors: Still too expensive, too slow and too risky." Institute for Energy Economics and Financial Analysis. Valley City, OH. May 29, 2024. https://ieefa.org/sites/default/files/2024-05/SMRs%20Still%20Too%20Expensive%20Too%20Slow%20Too%20Risky_May%202024.pdf

[17] Makhijani, Arjun. *Prosperous, Renewable Maryland: Roadmap for a Healthy, Economical, and Equitable Energy Future*. Institute for Energy and Environmental Research. November 2016.

and planning processes needed to implement its recommendations, our state could resolve the various barriers that have made it difficult to keep pace with our renewable energy targets and climate goals. But creating a nuclear reactor procurement program will do just the opposite, bogging down the PSC in decades-long planning and construction of nuclear reactors, with a strong likelihood of burdening Maryland families and businesses with rate increases, while failing to address the fundamental policy and planning obstacles to deploying renewables and emissions-reducing technologies rapidly and affordably.

For these reasons, the Nuclear Information and Resource Service respectfully urges an UNFAVORABLE report in Committee.

https://ieer.org/wp/wp-content/uploads/2016/11/RenewableMD-Roadmap-2016.pdf

SB0434_IndivisibleHoCo_FAV.pdf
Uploaded by: Virginia Smith
Position: UNF

SB0434

Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act

Testimony before Education, Energy, and the Environment

Hearing February 20, 2025

Position: Unfavorable

Dear Chair Feldman and Co-Chair Kagan, and members of the committee, my name is Virginia Smith, and I represent the 900+ members of Indivisible Howard County. Indivisible Howard County is an active member of the Maryland Legislative Coalition (with 30,000+ members). We are providing written testimony today **opposing SB0434**, which says it wants to reaffirm the states goal of achieving 100% clean electricity and address the current needs of reliable energy and the substantial increase in utility rates that many Marylanders have experienced this winter.

While this bill contains some important aspects, including increasing the amount of clean energy required starting in 2025 (from 35.5% from Tier 1 sources to 60.5%) and increasing each year, we do not believe the methods laid out in the bill will result in the impacts for which the State is aiming. For instance, it proposes to add nuclear energy to the renewable portfolio and build new nuclear energy projects, including small modular nuclear reactors, but from experience in other states this will take years and do nothing to address the needs of Marylanders now, as well as cost more than predicted. The Georgia Power Vogtle Units 3 and 4 took 15 years to build, and in the end cost twice what was projected ($36.8 billion)[i]. In Utah, the Utah Associated Municipal Power Systems NuScale Power small modular nuclear reactor was projected to cost $3 billion, but rose to $9.6 billion before the project was abandoned[ii]. Finally, a study looking at the levelized capital costs of electricity production found that nuclear is three times the cost of solar[iii].

In the end, it appears that this bill will pull focus and resources from cheaper and easier to implement renewable options, like wind and solar to invest in nuclear, which experience has shown often runs over budget and over time and would do nothing to help Marylanders struggling with paying their bills now.

For these reasons we respectfully urge an unfavorable report.

Virginia Smith
Columbia, MD 21044

[i] https://thirdact.org/georgia/2024/06/09/plant-vogtle-the-true-cost-of-nuclear-power-in-the-u-s/
[ii] https://www.utilitydive.com/news/nuscale-uamps-project-small-modular-reactor-ramanasmr-/705717/
[iii] https://www.lazard.com/media/xemfey0k/lazards-lcoeplus-june-2024-_vf.pdf

OPC Testimony HB0505 & SB0434 and Resource Adequac

Uploaded by: David Lapp

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BILL NO.:	Senate Bill 0434 / House Bill 0505 – Empowering New Energy Resources and Green Initiatives Toward a Zero-Emission (ENERGIZE) Maryland Act
COMMITTEE:	Education, Energy, and the Environment Economic Matters
HEARING DATE:	February 20, 2025 (EEE) February 21, 2025 (ECM)
SPONSOR:	The President (By Request - Administration) and Senators Brooks, Ellis, and Watson The Speaker (By Request - Administration) and Delegates Allen, Cardin, Ebersole, Fennell, Patterson, Turner, and Wu
POSITION:	Informational

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The Office of People's Counsel ("OPC") respectfully offers the following informational comments on SB 434/HB 505, the ENERGIZE Maryland Act. The Act seeks to codify the State's goal of 100% clean electricity and advance the State's clean energy goals. Specifically, the Act would (1) expand existing renewable portfolio standards to include nuclear energy generation as a qualifying resource under the renamed "clean energy standard" and (2) promote the development of nuclear energy generation in the State by establishing a procurement mechanism run by the Public Service Commission ("PSC"). The procurement mechanism would function similarly to the State's existing offshore wind ("OSW") renewable energy credit, or OREC, program.

Our comments below (1) describe the pros and cons of long-term, ratepayer--backed procurements for generation projects, (2) discuss provisions in the legislation intended to protect utility customers, and (3) provide context explaining that Maryland is not facing immediate needs for significant expansion of in-State generation to maintain reliable service.

A stated goal of the Act is to facilitate the construction of at least 3,000 megawatts of electricity from clean energy generation projects in the State. The long-term procurements anticipated by the ENERGIZE Maryland Act would—like ORECs—be backed by utility ratepayers. Under the OREC model, if the OREC cost is below future market prices, Maryland customers benefit. But ratepayers take on significant risks that the prices locked-in through long-term procurements will exceed future market prices. Whether long-term procurements increase or decrease costs for customers depends on whether the solicitation procures energy and capacity at prices that end up being above or below market rates. A procurement during times of high prices could benefit customers if prices remain high over the 20-30 years following the date of commercial operation of the plant—which itself could be more than 10 years from the procurement date. But if the solicitation process locks in prices that are higher than actual market prices in future years, customer bills will be higher than they otherwise would be. This risk for ratepayers exists under any long-term, fixed-price arrangement, and the further out in time the arrangement lasts, the more difficult it is to speculate on future generation markets.

While there are risks inherent to locking in energy prices through long-term, ratepayer-backed- procurements, these risks can be mitigated to some degree. The Act includes several provisions to mitigate risks, some of which could be strengthened, as follows:

- *Requiring an applicant for an offshore wind project to deposit into an escrow account an amount to be determined by the PSC and not less than $5,000 per megawatt of nameplate capacity, to be forfeited in the case of withdrawal.* The intent of this requirement is to dissuade applicants from withdrawing a project once approved, but the funds may also allow the State—or ratepayers, to the extent they have made any payments—to recoup their losses. As drafted, however, the Act contains no similar requirement for an applicant for a nuclear energy generation project.[1] To similarly dissuade withdrawal of approved nuclear projects and protect State and ratepayer investments in nuclear energy development, this requirement should also be added to § 7-1203(7).

- *Requiring the PSC to determine net rate impact thresholds for the nuclear energy generation projects procured as a result of the Act.* As in the OSW statute, these thresholds can put an upper limit on resulting increases on customer bills. Instead of setting a specific threshold in statute, however, the Act directs the PSC to determine the relevant thresholds and keep them

[1] Proposed PUA § 7-1203(7) requires a commitment from an applicant for a nuclear energy generation project to deposit at least $6 million into the Maryland Clean Energy Business Development Fund established under SG § 9-20C-03. Round 2 OSW applicants are already subject to a similar requirement under PUA § 7-704.1(h). The new requirement for an OSW applicant to make a deposit into escrow is in addition to the deposit into the Maryland Clean Energy Business Development Fund.

confidential. The Act also removes the specified ratepayer impact thresholds in the existing OSW statute and instead directs the PSC to determine the appropriate thresholds and keep them confidential. Although the intent of leaving specific thresholds out of the statute appears to be to keep project applicants from "bidding to the cap," the Act as drafted provides the PSC with no guidance about how to determine an appropriate ratepayer impact threshold, leaving open the potential for an excessively high threshold in order to meet the goals of the Act. As an additional, minimum ratepayer protection, the Act should provide the PSC with some guidance on the level of the allowable ratepayer impact for both OSW and nuclear procurements. For example, the Act could direct the PSC to base the threshold on its determination of the value of the procurement in mitigating customer exposure to future high wholesale market prices, taking into account best estimates of future prices in the capacity, energy, and ancillary service markets.

- *Requiring that a PSC order approving a proposed nuclear project provide that ratepayers and the State be held harmless for any cost overruns associated with the project*. This provision is particularly important given the recent history of nuclear power development in the United States. The most recent completed reactors in the United States— Vogtle units 3&4 in Georgia—were significantly behind schedule and cost $36.8 billion: $22 billion more than the initially projected cost of $14 billion. In December 2023 and May 2024, the Georgia Public Service Commission approved on aggregate a 23.7 percent rate increase and a 47.3 percent expansion in utility rate base, in exchange for only a 7.51 percent expansion in generating capacity for Georgia Power.[2] The electricity from Vogtle is, therefore, the most expensive in the world at $10,784/kW; typical generation prices for wind, solar, or natural gas range from $1,000 - $1,500/kW.[3] Recent developments with small modular nuclear reactors have not fared any better. In November 2023, NuScale, the developer of a small modular reactor ("SMR") that had been the project closest to reaching commercialization, cancelled its project after significant delays and costs increased from initial estimates of $3 billion in 2015 to $9.3 billion at the time of cancellation in 2023.

[2] Georgia Pub. Serv. Comm'n, *Order Adopting Stipulation*, Docket No. 29849, Document Filing No. 217284 (Jan. 31, 2024), https://psc.ga.gov/search/facts-document/?documentId=217284, at 13 (allowing for recovery of financing costs and capital costs).
[3] Patty Durant, Kim Scott, and Glenn Caroll, *Plant Vogtle: The True Cost of Nuclear Power in the United States*, Cool Planet Solutions (May 2024), https://truthaboutvogtle.com/wp-content/uploads/2024/06/Truth-about-Vogtle-report.pdf, at 23.

- *Barring payments under a long-term pricing schedule until electricity supply is generated by the project*. This provision appears to protect customers from paying for nuclear generation if the project never goes into operation. It should be noted, however, that if a project is completed, it could mean a substantial increase in utility rates at the time of commercialization, depending on market prices.

OPC appreciates these efforts to limit ratepayer exposure to the risk of cost overruns and to prevent customers from paying for the project until the project generates energy.

Important context to any legislation that increases risks to Maryland utility customers is that the State does not need to take immediate action to encourage the development of large power plants in the State. Under conservative assumptions, Maryland has sufficient resource adequacy—ability to "keep the lights on"—in the near term to meet the peak demands on its system. Specifically, sufficient transmission and generation resources currently exist to meet the resource adequacy needs for every part of the State through at least 2029.[4] For additional information and context, please see the attached FAQs, also available on OPC's website.

Further out into the future, PJM is not forecasting significant load growth in Maryland. Some growth is forecasted in the Frederick area due to data center projects; however, that area has not historically been transmission-constrained, meaning that there is sufficient existing transmission capacity to allow that area to be served by all the resources in PJM. PJM's forecasts of average annual demand growth through 2045 for the other Maryland zones that have historically been transmission-constrained—including the BGE zone—are modest, ranging from 0.37 percent to 0.67 percent.[5]

Even if new generation—even new *clean* energy generation specifically—is needed, the high prices in PJM capacity market are providing incentives to existing generation—though not limited to clean energy generation—to remain online and to new generation to come online. These resources would be backed by private investors—without the set-prices created by the procurement mechanism in the Act that are backed by utility customers. No Maryland laws preclude new generation of any sort from building in Maryland, provided they meet siting and other local requirements. Moreover, any new nuclear energy generation would take many years before commencing operations, likely more than 10-15 years and potentially much longer, extending further

[4] *See* Office of People's Counsel Comments, Public Service Commission Admin Doc. No. PC66, Submission No. 31 (explaining results of technical analysis). Beyond 2029, additional planned transmission capacity is needed. PJM has already approved construction of transmission—scheduled to come online in 2028—to fill this need. *Id.*

[5] https://www.pjm.com/-/media/DotCom/library/reports-notices/load-forecast/2025-load-report.pdf

out in time the uncertainty of calculating an appropriate cost that ratepayers would be committed to.

In sum, long-term procurement of power presents risks for customers, and all proposed projects should be carefully considered based on the costs of the project and market conditions at the time. Fixed-price arrangements can limit customers' exposure to cost overruns, but there is still the risk that the fixed-price turns out to be higher than market prices. Also, once there has been substantial investment in a project, there is significant pressure to adjust the fixed-price to cover cost overruns to ensure that the project is completed. There should be particular caution in the case of proposals to support nuclear energy generation, where there is a history of project cancellations and substantial cost overruns. Given that current high capacity prices may well incent the development of new generation supported by private investors without additional ratepayer backing, these risks to ratepayers are not necessary. Should the General Assembly choose to move in this direction, however, any legislation should, at a minimum, include the protections for ratepayers discussed above.

OPC appreciates the opportunity to provide comments on HB 505/SB 434 and is available to answer questions.

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(January 28 2025)

Maryland Resource Adequacy FAQs

What is resource adequacy?

Resource adequacy requires having enough electricity generation to serve peak demand—including a "reserve margin" buffer for uncertainty—along with enough room on the transmission system to reliably deliver the power to customers.

Who is responsible for ensuring resource adequacy in Maryland?

PJM Interconnection, LLC (PJM), the regional transmission organization (RTO) for Maryland and 13 other jurisdictions in the region, is responsible for ensuring resource adequacy in Maryland. RTOs like PJM operate the transmission system and the wholesale energy markets and are regulated by the Federal Energy Regulatory Commission (FERC). Subject to FERC's oversight, PJM sets the reserve margin necessary to meet the reliability and resource adequacy criteria established by the North American Electric Reliability Corporation (NERC) and the regional entity to which NERC delegates authority, the Reliability First Corporation, to determine and assess electric reliability, including resource adequacy, for PJM.

PJM evaluates resource adequacy for the PJM region as a whole, as well as smaller zones within the region (called Locational Deliverability Areas or LDAs).

How is resource adequacy achieved in Maryland?

PJM runs auctions for "capacity" in which generation companies commit to being available to run when needed to meet demand. The capacity auctions (in PJM parlance, the Base Residual Auction, or BRA) are run annually and have the goal of ensuring sufficient generation to meet power needs for the region as a whole (PJM's regional territory) and—based on the ability of the transmission system to import power—for the smaller zones within the region. The auction is designed to enable the procurement of sufficient resources to satisfy the resource adequacy criteria applicable to PJM and Maryland.

What is the resource adequacy situation now?

PJM ran its latest capacity auction in July 2024. That auction secured enough capacity to meet anticipated customer peak power demands and a sufficient reserve margin for the PJM region as a whole and for most zones in Maryland for the 2025/2026 delivery year—which runs from June 1, 2025, to May 31, 2026. In that auction, the capacity bids to meet PJM's requirements in Baltimore Gas & Electric's service territory zone—called the "BGE LDA"—fell just short because the Brandon Shores and Wagner power plants, having announced an intention to retire, did not bid into the auction. Although these results *do not* indicate expected outages in the BGE LDA, the results *do* indicate a need for more generation or transmission.

PJM ensured reliability in the BGE LDA for the 2025/2026 delivery year by entering into "reliability must-run," or "RMR" arrangements with Brandon Shores and Wagner. RMR arrangements keep the plants online past their intended retirement date and obligate the plants to generate power until planned transmission enhancements add new capabilities to import power into the area. It is reasonable to conclude that the BGE LDA will not have resource adequacy—or reliability—issues for the foreseeable future because of the RMR arrangements and the planned transmission enhancements that will replace the generation lost by these plants' retiring.

Under RMRs, generators commit not to retire their power plants at their announced retirement date and are guaranteed payment at a regulated rate which is almost always much higher than the market rate. They are paid that higher rate even if their exclusion from the capacity market increases the clearing price for the capacity market.

Following the summer 2024 auction, OPC and many others challenged PJM's policy of excluding Brandon Shores and Wagner from the auction, and PJM is now seeking to change that policy to include RMR units in the auction. Doing so should reduce the costs for ratepayers in the region, who currently functionally pay for the capacity of the power plants twice: once through the inflated capacity market prices, and again through the RMR arrangement that also ensures the units act as capacity.

OPC released a report on the 2024 capacity market auction, the RMR arrangements and their impacts on customers in August 2024.[1]

[1] Bill and Rate Impacts of PJM's 2025/2026 Capacity Market Results & Reliability Must-Run Units in Maryland, OPC (August 2024).

What are the future prospects for resource adequacy in Maryland?

Maryland appears to have sufficient resource adequacy in the near term to meet the peak demands on its system.[2] Any assessment of Maryland's resource adequacy should include an assessment of both generation resources located within each of the LDAs in Maryland and an assessment of the power transfer capacity into the LDAs in Maryland using the transmission system. It should also include other measures such as demand response and energy storage, accounting for existing tools the Public Service Commission has to mitigate resource adequacy issues. The contribution to resource adequacy from Maryland-located generation depends, in part, on finalizing RMR arrangements for the Brandon Shores and Wagner power plants near Baltimore—which appears imminent—and the continued availability of the Calvert Cliffs Nuclear Plant to serve existing customers.

Based on information received from Maryland utilities, PJM is not forecasting significant data center growth in Maryland. Some data center growth in the Frederick area will occur, but that area is not transmission-constrained, which means that existing and planned transmission for those data centers will ensure resource adequacy there. PJM's forecasts of average annual demand growth through 2045 for the other Maryland zones—including the BGE zone—are modest, ranging from 0.37% to 0.67%. PJM's transmission solutions for planned power plant retirements intend to address the resource-adequacy impacts of those retirements. Further, all of Maryland's coal-fired power plants have already retired or announced plans to retire. Higher capacity market prices across PJM also are incentivizing plants to remain online or come out of retirement.[3]

PJM is scheduled to run its next auction in June 2025 for the 2026/2027 delivery year that runs June 1, 2026, to May 31, 2027. Some analysts are predicting that there will not be enough capacity to meet the expected demand and reserve margins for PJM as a whole in that auction. These predictions are due to forecasts of data center growth mostly outside of Maryland and present issues largely beyond Maryland's control.

Does Maryland's status as a "net importer" of generation mean more in-State generation is needed for resource adequacy?

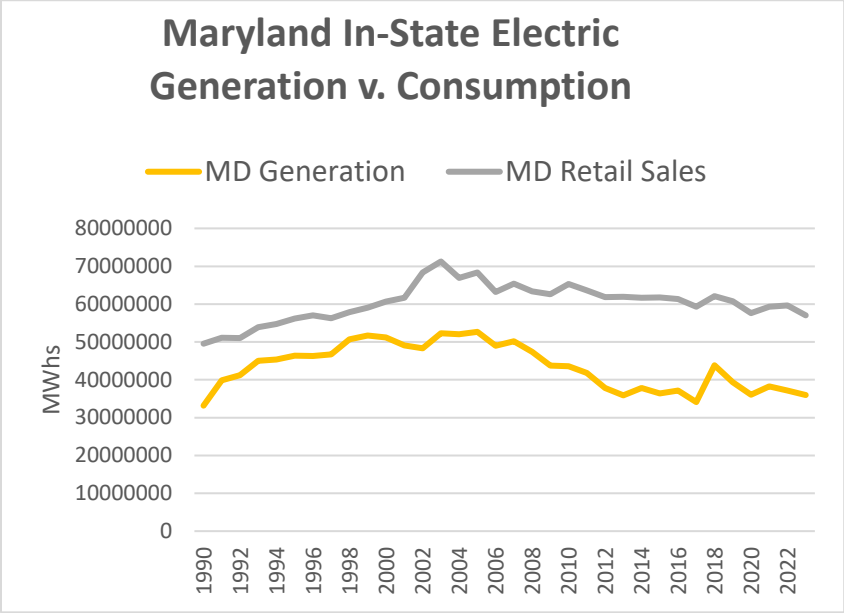
No. Resource adequacy depends only in part on the geographic source of energy production. It is mostly a function of peak demand and the combination of generation and transmission capability to meet that demand. Maryland's status as a net importer speaks to overall energy consumption—at all times of day over the course of a year—and is measured in megawatt-hours (or kilowatt hours), which is a different measurement than used for reliability and system capacity—*megawatts*. Meeting resource adequacy requires

[2] Public Service Commission PC66, Comments of the Office of People's Counsel (Jan. 17, 2025).
[3] *See*, for example, Middle River Power reverses plan to shut 540-MW plant amid record PJM capacity prices, Utility Dive (Sept. 12, 2024). The plant discussed in this article is in Illinois.

having sufficient *megawatts* available at time of highest demand on the system, while Maryland's status as a net importer of 40 percent of its *megawatt hours* speaks only to overall energy consumption.

The relevant available data does not show that there is a near-term need for generation located in Maryland for reliable electric service. The transmission system in place can import sufficient power into Maryland, and new transmission under development will increase that capability as power plants retire.

Maryland has imported a portion of its power needs for many decades through both periods of high and low energy costs.[4] In fact, more states in PJM are energy importers than exporters. D.C. imports about 98 percent of energy, and Delaware about 57 percent. As long as there is enough capacity in the region and sufficient transmission to deliver the electricity, importing part of Maryland's energy needs poses no risk to Marylanders.



Maryland, like many states in PJM, has long imported more electricity than it generated.

In fact, Maryland customers benefit from being part of a diverse regional system and market, and it has been part of PJM for more than 60 years.

It is true, however, that new generation is needed within PJM's broader footprint, considering increasing demand from data centers and potential power plant retirements.[5]

[4] *See* State Electricity Profiles, EIA, Table 10. Maryland has been a net energy importer of electricity every year since 1990 (the EIA only provides data going back to the '90s). In 2013, Maryland imported 30,881,323 MWh, or 46% of its total electricity from other states, the highest annual import to date. 1998 was the lowest year of imports since 1990, with 13,945,102 MWh, or 22% imported into the state. In 2023, 24,139,011 MWh, or 40% of the state's demand, was imported.

[5] At least some of this demand may be illusory. *See*, e.g., Investors may overestimate benefits to utilities of datacenter boom, S&P Global (June 18, 2024). Regardless, because PJM has accepted projected load growth from data centers, it has increased the capacity requirements to meet the reliability requirement.

Maryland, however, cannot address regionwide resource adequacy issues raised by data center growth elsewhere in PJM without taking on significant costs.

How can Maryland lower the costs of assuring resource adequacy for customers?

Even though it is likely that there will be sufficient resources in Maryland to meet resource adequacy standards, tight market conditions *throughout* PJM could lead to high prices for capacity for Maryland customers in upcoming years. A variety of "no-regrets" solutions could enhance resource adequacy, reduce risks to customers of reliability issues, and minimize the chances of paying high prices for potentially unnecessary transmission and generation. These no-regrets measures include:

- *Demand flexibility and response*. Foremost among "no regrets" solutions are measures to enhance demand flexibility and response. Demand response refers to programs that pay or credit consumers for decreasing their energy use during peak demand hours. Estimates from the EmPOWER future programming work group indicate that it would be cost effective to deploy more than four times the amount of demand response utilities paid for in 2023.[6] Demand response can bid into PJM's capacity market, and so, in addition to decreasing the real-time cost of electricity, can decrease capacity costs for consumers.

  The electric system is built for—and resource adequacy is measured based on—peak demands on the system. Programs that encourage consumption more evenly across the day would decrease peaks that drive resource adequacy needs and thereby decrease system costs.

- *Energy efficiency*. Maryland could also take measures to require more energy efficient appliances. While energy efficiency can no longer bid into PJM capacity markets,[7] encouraging energy efficiency can still reduce capacity demand. Energy savings means that less capacity is needed to serve the lower peak demand, thus decreasing capacity costs, while also lowering customer bills. An analysis for the EmPOWER energy-efficiency programs found vast quantities of cost-effective energy-efficiency savings are available beyond what the current EmPOWER program alone can provide.

- *Existing transmission enhancements*. The transmission system is part of the resource adequacy equation. Limits on how much electricity can be delivered

[6] Utilities procured 125 MW of demand reduction in 2023. *See* The EmPOWER Maryland Energy Efficiency Act Report 2024, Public Service Commission (May 2024), at 15. It would be cost effective to procure more than 500 MW of demand response. *See* Maryland GHG Abatement Study Final Response, Applied Energy Group (Dec. 2, 2022), at 40. Originally submitted to the PSC under maillog number 300426.

[7] On Nov. 5, 2024, FERC accepted tariff revisions from PJM that prevent energy efficiency from participating in the capacity markets. *See* Docket No. ER24-2995.

over any given transmission line are determined by the physical characteristics of the wire. Grid enhancing technologies, also called GETs, refer to a suite of new technologies that provide low-cost methods to make the most of existing transmission infrastructure. GETs can help defer, or even avoid, expensive construction of new transmission lines and enable more generation to connect to the system and serve customers. One study estimates that GETs could save $1 billion annually across PJM by 2033.[8]

- *Distributed Energy Resources (DERs)*. Greater deployment of DERs—such as rooftop solar, community solar, and batteries—can also promote resource adequacy and decrease capacity costs. DERs connect to the distribution grid—and not the transmission grid—and so are not impacted by the current delays in PJM's process for connecting generation at the transmission level. DERs can either participate as demand response—by allowing residential customers to draw energy from their battery or "behind-the-meter" solar, rather than the grid, during times of peak demand—or they can be aggregated in a "virtual power plant" (VPP) to act as a generator that can bid capacity into the capacity auction. Studies have shown that virtual power plants can provide great value to the grid, with one study finding that VPPs could save utilities $15-$35 billion in capacity investments over a 10-year period.[9]

- *Energy storage*. Energy storage can "firm up" the capacity value of intermittent renewable generation by allowing energy from solar and wind to be stored and later deployed at moments of peak demand. Energy storage can help avoid costly transmission-system upgrades by pre-flowing energy over a transmission line and storing it on the other side of the line prior to times of peak demand. When demand peaks, energy can then be supplied *both* over the transmission line in real time, and from the batteries.

- *Surplus interconnection service*. PJM is asking FERC to approve more robust surplus interconnection service (SIS), which could also promote resource adequacy and lower costs. Many generators—especially intermittent renewable generation—do not use their full allowable transmission capacity.

  More robust SIS would enable additional generating units to share the interconnection with existing generators so long as the combined generation does not export more than the existing generation's maximum allowed output at any given moment. SIS could allow solar and wind resources to add battery storage to their sites and significantly increase supply in the PJM capacity market. One study estimated that batteries utilizing SIS on existing PJM solar interconnections alone could unlock an additional 5,862 MW of capacity—an

[8] GETting Interconnected in PJM, RMI (February 2024).
[9] Real Reliability: The Value of Virtual Power, Brattle (May 2023), at 25.

amount equivalent to about 90% of Maryland's largest utility's current peak demand.[10] If FERC approves PJM's proposal, State policies to site batteries alongside intermittent generators using SIS could add new capacity within approximately one year.

Are there other measures that Maryland should take to assess or address resource adequacy?

Maryland can require greater information about large customers—such as data centers—that plan to locate in Maryland and take measures to ensure that new big customers do not harm existing customers. For example, Maryland could require large customers to provide for their own generation needs and contribute to State policies and programs such as the Electric Universal Service Fund, EmPOWER, and the State's clean energy goals. Further, data centers that have flexible power needs could bring benefits to the system.

Also, the State could take actions to promote more accurate forecasts of future loads, and State agencies can advocate for beneficial changes to PJM and FERC policies. OPC is very active as a member of PJM, engaging daily in PJM workgroups and processes and advocacy before the FERC.

Is now a good time for Maryland to require in-State generation?

No. Interest rates are high, supply chain challenges are ongoing, and the high prices in PJM capacity market are providing incentives to existing generation to remain online and new generation to come online without ratepayer backing. As has long been the case for Maryland, if it's profitable because it's needed, private generation companies can provide the investor backing for new generation plants.

Moreover, any new baseload generation would take many years before commencing operations, likely more than six years and potentially longer, extending further out in time the uncertainty of calculating an appropriate cost that ratepayers would be committed to.

Further, the data on load forecasts is fraught with speculation. Demand growth is likely to "fail to materialize as forecast," a January 2025 analysis from Bank of America concludes, and when this happens "there are significant risks to overbuild of resources with no demand to serve."[11] Without an immediate urgency, Maryland would be better off waiting to see how projections for increasing electricity demand in other parts of PJM play out.

[10] ReSISting a Resource Shortfall: Fixing PJM's Surplus Interconnection Service (SIS) to Enable Battery Storage, ACORE (Sept. 18, 2024).
[11] US Power & Utilities: Year Ahead 2025: Is Past What's Prologue?, Bank of America (January 7, 2025)

Finally, as described above, **there is no immediate resource adequacy issue requiring Maryland to take action that risks further increases to utility customer bills**. Most Maryland utility customers are already facing some of the highest bills they've ever seen because of massive rate increases over recent years, as described in our June 2024 rates report.

Would allowing Maryland's utility monopolies to build and own power plants enhance resource adequacy and, if so, at what cost?

As noted above, Maryland does not need to take action to encourage the building of large power plants within the State. While any generation may lower costs in the medium to long term, utility-owned generation would likely do so at a higher cost than relying on independent power producers to construct more generation in the competitive market or making the most of the alternatives described above. In Maryland, law in place since 1999 allows utilities to build and own generation subject to Public Service Commission approval, but this law has not been utilized.

Allowing utilities to build generation poses significant risks to Maryland's utility customers, with few offsetting benefits.

First, utility ratepayers could bear uneconomic costs. Maryland ratepayers would still have to cover power plant costs (plus a profit margin) if the units sit unused because there are other lower-cost generators available to serve customers or they are incompatible federal or State climate goals. Indeed, data shows that New Jersey customers narrowly avoided paying nearly a half billion dollars above the market over the last ten years because a proposal to build out-of-market generation was overturned by the courts.

Second, utilities have no inherent advantages in constructing generation over non-utilities other than their ability to recover all their costs—no matter how high—from their captive customers. Non-utility generation companies, in fact, purchase the equipment to build generating plants from the same vendors as a Maryland utility would. Also, many non-utility companies have much greater experience actually building generation, which utilities have not done for about three decades.

Third, any new gas plant will take years—likely much more than five years—to come online.[12] By that time, planned new transmission is highly likely to be completed that will be available to serve Maryland customers and would allow other generation sources to

[12] *See* Silverman et. al, Outlook for Pending Generation in the PJM Interconnection Queue (May 2024) at 9, (finding that "[A]bsent significant reforms or market innovations, most projects entering PJM's queue today are unlikely to come online before 2030.").

compete against—and potentially out-compete—a utility-owned generating plant, to the detriment of customers, as the New Jersey example shows.[13]

Finally, although additional new generation anywhere in the PJM region potentially decreases capacity costs by increasing supply, in the case of utility-owned generation, customers themselves do not necessarily benefit from lower prices. Rate-regulated utilities—which have exclusive government monopolies and captive customers—are paid on a "cost-plus return" basis, and if the costs are higher than competitor's costs, the utility is generally entitled to recover those costs plus its return as a matter of law. And because there is great uncertainty with projecting generation market prices over the life of the power plant, it is not possible to know whether utility ownership of generation will benefit customers.

What *would* be certain, however, is that captive utility customers bear all the risks that the future costs paid to the utilities would be higher than market prices. That is the opposite of how risks are allocated currently to the investors of competitive generation companies.

Would it be different if Maryland directed its utilities to competitively procure new in-State generation through purchase power agreements?

Requiring a competitive procurement for generation rather than simply requiring utility generation investments would be more protective of utility customers because it would avoid some—though not all—of the problems described immediately above.

Most importantly, it would not avoid the guesswork about future market prices that puts ratepayers at risk. As the New Jersey example noted above illustrates, locking in prices with private generation companies shifts the risks of low future market prices to customers. One simply cannot know what the future capacity and energy markets will do. As with utility ownership, what *would* be certain is that captive utility customers would bear all the risks that the future costs of the procurement would be higher than market prices.

[13] There is currently 427.9 MW of capacity associated with projects that are not yet constructed but that do have signed interconnection service agreements (ISAs) in Maryland. These plants can come online and are not impacted by the queue delays. Queue delays are holding back a much larger tide of generation that wants to interconnect. There is 6,122.0 MW of capacity in the queue in Maryland, and 152,384.0 MW of capacity in the queue or under construction in PJM. *See* Serial Service Request Status, PJM.

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Delaware-Maryland Synod
Evangelical Lutheran Church in America
God's work. Our hands.

Testimony prepared for the
Education, Energy and Environment Committee
on
Senate Bill 434
February 20, 2025
as Comment

Mr. Chairman and members of the Committee, thank you for this opportunity to advocate for right stewardship of the commons. I am Lee Hudson, assistant to the bishop for public policy in the Delaware-Maryland Synod, Evangelical Lutheran Church in America, a faith community with three judicatories located in every part of our State.

Our community's commitment to clean energy has been on the public record in Maryland for decades.

The constellation of utility privatization in 1999 with its concomitant loss of in-state regulatory and planning authority, the outsourcing of infrastructure planning to commercial actors where the interest lies with shareholders and not ratepayers, and a quarter-century change in populations and economics, has produced a deleterious set of implacables with which this MGA session has to confront. We understand all that and acknowledge that solutions for climate catastrophe and utility infrastructure and management are narrowed-to-vanishing.

"I told you so" is not a useful service for the common good. But something does need to be said so that it can be recognized: subcontracting the public good to private interests with monopolistic authorization—there is a reason utilities began as "public"—has failed in this sector. Maryland, and this MGA session, is not alone in being an example.

Nuclear energy is "clean" energy only if you subtract its lethal wastes from its inventory. Nuclear waste is lethal on a geologic timeline.

Calvert Cliffs is a first-generation reactor. Deadly waste has been stored at its site for generations ever after. Site storage space is disappearing. This is not new information.

Nuclear waste management by law cannot be addressed by the State. There is no national policy plan for what to do with it. There is presently no plan for policy planning for how to store, transport, secure, and dispose of it. What is being done with **Senate Bill 434**, after all the "all of the above" rhetoric, is that Maryland ratepayers are financing another commercial project to keep the lights on at the expense of their safety and welfare. You'll also be requiring them to finance yet one more private interest authorized to hold the common good hostage through their influence over public decision-making.

And that is how Maryland got here. And it needs to be said in public and that is what we are doing.

Lee Hudson

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